

# ACTIVITY REPORT

For the period ending 30 June 2019

WESTERN AREAS LTD



## STRONG CASHFLOW QUARTER, FULL YEAR GUIDANCE METRICS MET, ODYSSEUS PROJECT EARLY WORKS COMPLETED ON TIME AND ON BUDGET

### JUNE QUARTER 2019 HIGHLIGHTS

- Unit cash cost of nickel in concentrate of **A\$2.96/lb** and A\$2.98 for FY19
- Mine production of **5,423 nickel tonnes** and 23,208 nickel tonnes for FY19
- Mill production of **5,433 nickel tonnes** and 21,675 nickel tonnes for the FY19
- Highest quarter nickel sales of **5,890 nickel tonnes** and 21,483 nickel tonnes for full year
- Strong free cashflow lifting cash at bank by **A\$27.6m** to A\$144.3m (March quarter A\$116.7m)
- Odysseus early works completed on time and on budget
- Kidman proposed change of control transaction expected to realise A\$33.1m for Western Areas

*Western Areas Managing Director, Mr Dan Lougher, said the June quarter produced another consistent performance in line with plans across the operations that generated strong operational cashflow and delivered full year guidance metrics.*

*“It is also very exciting to see completion of the Odysseus Project early works on time and on budget, which underpins the development of our next long-life nickel sulphide operation.”*

Western Areas (“WSA” or the “Company”) (ASX: WSA) is pleased to report a strong quarter of cashflow generation, while also meeting all production and cost guidance metrics for FY19. The early works programme at the Odysseus project was completed during the quarter, demonstrating the Company’s commitment to this long-life project that is expected to underpin Western Areas’ long term nickel production.

The Forrestania operation continued to operate in line with plan, producing 21.7ktn of nickel in concentrate for the full year. June quarter sales of 5,890 nickel tonnes in concentrate were the highest for the year, benefiting from the drawdown of nickel concentrate awaiting shipment at the end of the previous quarter.

Strong free cashflow of \$27.6m for the period was achieved due to increased quarter-on-quarter nickel tonnes delivered to customers, a less volatile commodity price and a A\$10.3m cash receipt on 1 April related to a concentrate shipment at the end of the March quarter. Importantly, cash plus nickel sales receivables continued to build during the quarter, increasing to A\$157.1m (March quarter A\$149.9m), confirming the robustness of the underlying business. The cash position is expected to be further enhanced, should a proposed change of control transaction for Kidman Resources Ltd complete during the coming quarter, with Western Areas anticipating it will receive A\$33.1m for its 17.4m shares in Kidman.

The Odysseus Project early works package was completed on time and on budget. This included the rehabilitation of the decline down to the 10,000m RL pump station (500m below surface), with pump station mechanical and electrical designs complete. Further, the dismantling of the shaft headgear and winder in South Africa has commenced, with an expected delivery into Perth during the third quarter of FY2020. The Company also successfully recruited experienced project construction personnel. Work continued on mining studies for the AM5/6 deposits, with the potential to mine these deposits providing both upside and optionality within the mining production sequence at Odysseus.

The nickel market continues to show signs of tightening supply, with the LME stockpile now falling to its lowest level in seven years, currently reporting at 150kt of available nickel. Given the company’s key offtake agreements are due to expire in early 2020, Western Areas will shortly commence offtake discussions with various market participants. The continued strengthening in the market provides encouragement that more favourable terms can be achieved in these upcoming offtake negotiations.



## PRODUCTION OVERVIEW

Item	Unit	FY19				YTD Total
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr	
Total Ore Mined	tonnes	141,567	139,528	141,595	133,312	556,002
Mine Grade	Ni %	4.1%	4.2%	4.3%	4.1%	4.2%
<b>Total Nickel Mined</b>	tonnes	<b>5,868</b>	<b>5,851</b>	<b>6,066</b>	<b>5,423</b>	<b>23,208</b>
Ore Processed (Milling/Concentrator)	tonnes	<b>156,706</b>	<b>154,517</b>	<b>146,935</b>	<b>152,329</b>	<b>610,487</b>
Processed Grade	Ni %	3.9%	4.0%	4.2%	4.0%	4.0%
Average Processing Recovery	%	89%	88%	88%	88%	88%
<b>Total Nickel in Concentrate</b>	tonnes	<b>5,379</b>	<b>5,415</b>	<b>5,448</b>	<b>5,433</b>	<b>21,675</b>
<b>Total Nickel Sold</b>	tonnes	<b>5,018</b>	<b>5,386</b>	<b>5,189</b>	<b>5,890</b>	<b>21,483</b>
Contained Nickel in Stockpiles	tonnes	4,820	4,413	4,510	3,317	
Cash Cost Nickel in Concentrate	A\$/lb	<b>2.99</b>	<b>3.15</b>	<b>2.82</b>	<b>2.96</b>	<b>2.98</b>
Cash Cost Nickel in Concentrate	US\$/lb	2.19	2.26	2.01	2.07	2.13
Exchange Rate	US\$/A\$	0.73	0.72	0.71	0.70	0.72
<b>Net Nickel Price (before payability applied)</b>	A\$/lb	<b>7.91</b>	<b>7.01</b>	<b>8.31</b>	<b>7.66</b>	<b>7.72</b>

Western Areas has Australia's highest grade nickel mines and is a low unit cash cost producer. Its main asset, the 100% owned Forrestania Nickel Project, is located 400km east of Perth in Western Australia. Western Areas is also Australia's second largest independent sulphide nickel miner, producing approximately 22,000 to 25,000 nickel tonnes in ore per annum from its Flying Fox and Spotted Quoll mines - two of the lowest cost and highest grade nickel operations in the world.

An active nickel project developer at Cosmos and explorer at Western Gawler in Australia, the Company also holds exploration interests in Canada through shareholdings in Grid Metals Corp (TSXV:GRDM). Additionally, the Company has exposure to the emerging lithium market via a shareholding and exploration joint venture with Kidman Resources Limited.

The Board remains focused on the core business of low cost, long life nickel production, new nickel discoveries and generating returns to shareholders. It has put in place the cost structure and capabilities to prosper throughout the cycle by adopting prudent capital management and an opportunistic approach. Its latest presentation can be found at <http://www.westernareas.com.au/investor-centre/corporate-presentations.html>.

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## CORPORATE AND FINANCING

### FY19 GUIDANCE

The Company is pleased to report that all FY19 production guidance metrics were achieved, maintaining the Company's long history of meeting guidance.

Category	Updated FY19 Guidance	Actual FY19
Nickel tonnes in Concentrate Production	20,500 to 22,000	21,675
Unit Cash Cost of Production (Nickel in Concentrate)	A\$2.80/lb to \$3.20/lb	A\$2.98/lb
Sustaining and Mine Development Capital Expenditure	A\$32.0m to A\$36.0m	A\$35.6m
Expansion Projects & Feasibility	A\$23.0m to A\$25.0m <sup>1</sup>	A\$24.6m
Odysseus Early Works	A\$24.0m to A\$28.0m	A\$27.3m
Exploration	A\$12.0m to A\$15.0m	A\$15.4m

<sup>1</sup> Updated at half-year results release 20 Feb 2019

### CASHFLOW

The June quarter realised the highest operational cashflow for the year of A\$49.3m (March quarter A\$6.0m). This resulted from increased quarter on quarter nickel sales volume, cash receipt on 1 April for March export revenue of A\$10.3m and the benefit of a higher average (pre-payable deduction) nickel price for the second half of the financial year (June quarter A\$7.66/lb & March quarter A\$8.31/lb). Operating costs continue to be predictable and controlled in line with the plan.

A strong free cashflow of \$27.6m for the period resulted in A\$144.3m cash at bank at quarter end (March quarter A\$116.7m). Cash at bank plus nickel sales receivables totalled A\$157.1m (March quarter A\$149.9m). The significant cashflow items during the quarter included:

- A sustained stronger second half nickel price;
- The highest quarterly nickel sales volume for the year, following drawdown of the nickel awaiting delivery by quarters end;
- Odysseus mine development and DFS expenditure of A\$7.6m;
- The reversal of the timing variance for March export revenue of A\$10.3m (received on 1 April 2019); and
- Capital and mine development expenditure at Forresteria of A\$11.2m (March quarter A\$13.9m).

Growth expenditure for the Odysseus project at Cosmos of A\$7.6m (March quarter A\$6.6m), was mostly related to the completion of the underground decline rehabilitation works and the initial shaft haulage system dismantling and relocation costs.

Exploration expenditure was consistent for the quarter at A\$2.6m.

### HEDGING

When pricing is supportive, the Company manages nickel price and foreign exchange risk with a combination of short term quotation period (QP) hedging and a set limit of medium term hedging. The policy allows the use of forward sales, bought options and collar style options:

- QP hedging is used to manage the risk of price fluctuations for nickel already shipped to offtake partners, where the nickel price is yet to be finalised; and
- Medium-term hedging is used to manage the risk of nickel price fluctuations, with a maximum 25% of expected nickel sales per month hedged out for a period of 12 to 18 months.



Details of hedging in place at quarter end are as follows:

Hedging Details – FY20	
US\$ Hedging - Collar Options	
US\$ Hedged	22,500,000
Average Put	US\$0.6767
Average Call	US\$0.7233

## KIDMAN RESOURCES LIMITED (KIDMAN)

During the quarter Kidman and Wesfarmers Limited (Wesfarmers) entered into a Scheme Implementation Deed under which it is proposed that Wesfarmers will acquire 100% of the shares in Kidman at \$1.90 per share by way of a Scheme of Arrangement. Should the Scheme of Arrangement be approved by Kidman shareholders, Western Areas will receive A\$33.1m in exchange for its shareholding of 17.4m shares in Kidman.

This proposed transaction is a pleasing outcome for Western Areas, which will realise significant value from a shareholding received in exchange for two non-core tenements and an exploration farm-in agreement over selected tenements in the northern area of Forrestania. Western Areas' exploration joint venture with Kidman is unaffected, maintaining the Company's participation in any further exploration success on the joint venture tenements.

The Company's shareholding in Kidman had a market value of A\$32.8m, based on Kidman's last closing share price at 30 June 2019 of A\$1.88/share.

## MINE SAFETY AND ENVIRONMENT

### SAFETY

There were no Lost Time Injuries (LTI) during the quarter and Forrestania recorded the lowest Total Recordable Incident Frequency Rate (TRIFR) of 4.42 to date.

In June the Department of Mines and Industry Regulation (DMIRS) carried out a site audit on administrative systems for recording hours and levy calculations. Despite the complexities posed by multiple contractors, the on-site system performed well with no errors identified.

A new DMIRS Code of Practice was released during the quarter, relating to mental health for FIFO and construction workers. Concurrently, the safety department addressed this topic via the onsite safety newsletters and completed a comprehensive onsite risk assessment involving Health and Safety Representatives.

Emergency Preparedness exercises continued on site, with Emergency Response Team Members undergoing nationally recognised breathing apparatus and advanced fire training.



*ERT fire-fighting exercise*





## ENVIRONMENT

### Forrestania (FNO)

No reportable environmental incidents were recorded during the quarter.

The environmental team completed all required compliance monitoring and reporting and commenced a Surface Water Management Plan required as part of the Mine Closure Plan. This is updated every three years and is due to be resubmitted at the end of September. In addition, the Conservation Management Plan for exploration within the Jilbadji nature reserve was approved and is awaiting grant of the underlying tenements.

The annual rehabilitation program commenced in June with the reshaping of the Spotted Quoll waste rock dump and drainage repairs to the Lounge Lizard waste rock dump. The programme includes topsoil spreading and deep ripping of the batters of the Spotted Quoll waste rock dump. Following remedial earthworks, 24,000 seedlings will be planted by specialist contractors over approximately 2.5ha in July.



*Spotted quoll remedial seedlings*



*Spotted Quoll seedlings transport to remedial area*

### Cosmos

No reportable environmental incidents were recorded during the quarter and the environmental team completed all required compliance monitoring and reporting.

An additional five seepage recovery bores were installed around Water Management Ponds (WMP) 7 and 8, to improve the seepage recovery in the area.

An important milestone for the project was achieved during the quarter with the Department of Mines, Industry Regulation and Safety (DMIRS) approving the Cosmos Mining Proposal, including the Odysseus underground mine, new waste rock dump, shaft and associated infrastructure.



## MINE AND MILL PRODUCTION STATISTICS AND CASH COSTS

Tonnes mined	Unit	FY19				YTD Total
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr	
<b>Flying Fox</b>						
Ore Mined	tonnes	58,699	59,309	56,386	57,213	231,607
Grade	Ni%	4.0%	4.3%	4.5%	4.2%	4.2%
<b>Flying Fox Nickel Mined</b>	tonnes	<b>2,330</b>	<b>2,574</b>	<b>2,550</b>	<b>2,381</b>	<b>9,835</b>
<b>Spotted Quoll</b>						
Ore Mined	Tonnes	82,868	80,219	85,209	76,099	324,395
Grade	Ni%	4.3%	4.1%	4.1%	4.0%	4.1%
<b>Spotted Quoll Nickel Mined</b>	Tonnes	<b>3,538</b>	<b>3,277</b>	<b>3,516</b>	<b>3,042</b>	<b>13,373</b>
<b>Total Ore Mined</b>	Tonnes	141,567	139,528	141,595	133,312	556,002
<b>Grade</b>	Ni%	4.1%	4.2%	4.3%	4.1%	4.2%
<b>Total Nickel Mined</b>	Tonnes	<b>5,868</b>	<b>5,851</b>	<b>6,066</b>	<b>5,423</b>	<b>23,208</b>

### FLYING FOX

#### Mine Production

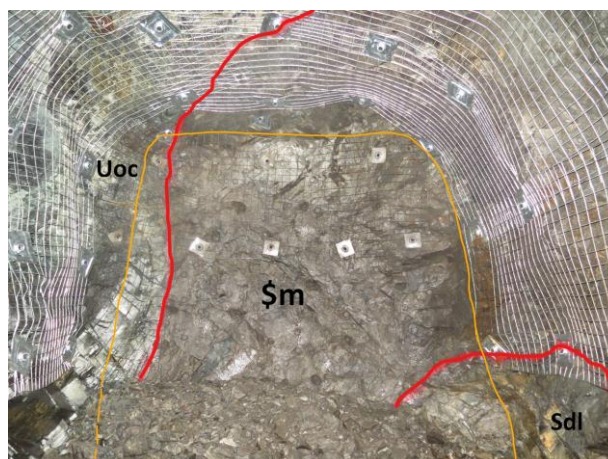
Production comprised **57,213 tonnes of ore at an average grade of 4.2% nickel for 2,381 nickel tonnes**. Ore production was predominately (77%) derived from long-hole stoping (LHS) and the remainder from ore drive development (23%).

LHS production was sourced solely from the T5 area, namely from the 460 (11.7kt @ 5.3% Ni), 425, 385 (4.0kt @ 4.6% Ni), 370 (6.0kt @ 5.1% Ni), 295 and 215 (8.4kt @ 4.6% Ni) stopes. Associated paste-filling of stope voids resulted in 13,882m<sup>3</sup> of paste being poured.

#### Mine Development

Total jumbo development of 569m, including 478m of twin boom development in the 'old Flying Fox' orebody and 91m of single boom development in the lower areas of the mine. Key activities included:

- 197m of twin boom capital development between the 1215 and 1150 levels in the 'old Flying Fox' orebody;
- 63m of operating waste development at the 1185 and 1195 levels, plus 22m of single boom development in the 160 level;
- 38m in paste-fill (between the 460 and 215 levels) to facilitate slot drilling;
- 218m of ore drive development between the 1220 and 1185 levels, plus 31m of single boom development at the 160 level; and
- 13m of capital vertical development at the 1170 level to establish primary flow-through ventilation and an escape ladder-way for the old Flying Fox stoping area.



1205 ore drive (4.0m W x 4.5m H) with a face grade of 5.3% Ni

## SPOTTED QUOLL

### Mine Production

Spotted Quoll production comprised **76,099 tonnes of ore at an average grade of 4.0% nickel for 3,042 nickel tonnes**. Ore production was sourced predominately from LHS (61%) with the remainder (39%) from ore drive development.

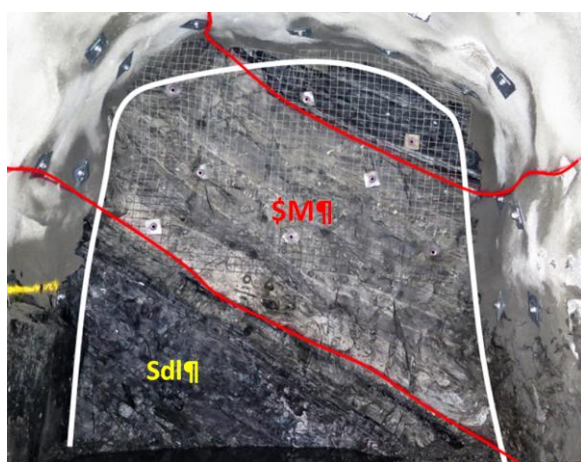
The 'twin-boom area' (TBA) saw ongoing production from the 660, 627, 610 and 595 levels. The 'single-boom area' (SBA) completed production on the 832 level, with ongoing production from the 920, 852, 842, 825, 819, 818, 804 and 795 levels, and commencement of the 840 level by mid-quarter.

### Mine Development

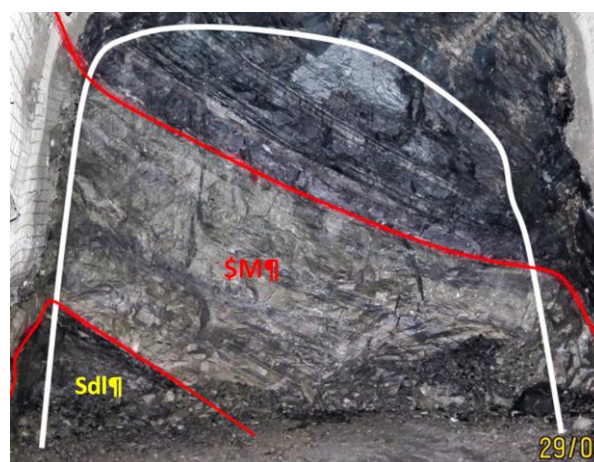
Total jumbo development for the quarter was 1,040m, which included 85m of capital decline development. During the quarter, 274m of lateral capital development and 228m of operating waste development was also completed, which included 64m of paste-fill development to facilitate slot drilling.

The 'Stage 2' 520 and 505 ore drive levels were established from the 510 level off the main decline, with 445m of ore drive development completed between the 580 and 505 levels.

Eight metres of SBA ore drive development was completed in the 818 secondary level.



550 ore drive (4.5m W x 4.5m H) with a face grade of 6.6% Ni



535 ore drive (4.5m W x 4.5m H) with a face grade of 5.7% Ni





## Infrastructure

At the Spotted Quoll 'Stage 2' zone, the capital primary return airway (RAW) ventilation network was advanced to the 510 Level with the successful opening of the 540 to 510 RAW long-hole rise.

## COSMIC BOY NICKEL CONCENTRATOR

Tonnes milled	Unit	FY19				YTD Total
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr	
	tonnes	156,706	154,517	146,935	152,329	610,487
Grade	%	3.9%	4.0%	4.2%	4.0%	4.0%
Ave. Recovery	%	89%	88%	88%	88%	88%
Nickel in Concentrate Produced (i)	tonnes	5,379	5,415	5,448	5,433	21,675
Nickel in Concentrate Sold	tonnes	5,018	5,386	5,189	5,890	21,483

(i) Includes MREP Nickel tonnes produced.

The Cosmic Boy Concentrator processed **152,329 tonnes of ore at an average grade of 4.0% nickel** for a total of **37,626 tonnes of concentrate grading 14.4% nickel**. This resulted in 5,433 nickel tonnes produced at a recovery of 88.4%, with average concentrator availability of 98.4%.

Full year production for the Cosmic Boy Concentrator (CBC) comprised 610,487 tonnes processed at an average grade of 4.0% for 146,549 tonnes of concentrate at 14.8% nickel, with average concentrator availability of 98.2%.

A total of 40,759 tonnes of concentrate were delivered for sale during the quarter, containing 5,890 nickel tonnes. This resulted in full year sales of 21,483 nickel tonnes within 147,325 tonnes of concentrate.

On 8 February 2019 the CBC celebrated its ten year anniversary and, by year end, had processed more than 5.6 million tonnes of ore and produced more than 230,000 tonnes of nickel in concentrate.

Other sales unit costs for the quarter were royalties at A\$0.28/lb and concentrate transport of A\$0.45/lb of nickel in concentrate delivered to customers.



*Loading concentrate containers for export to China*





## Stockpiles

Ore stockpiles at the end of the quarter totalled 77,098 tonnes of ore at 3.8% nickel for 2,955 nickel tonnes representing one and half months of mill feed. The concentrate stockpile at quarter end was 2,390 tonnes at an average grade of 15.1% nickel, containing 362 nickel tonnes.

Stockpiles	Unit	FY19			
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr
Ore	tonnes	118,549	101,455	96,114	77,098
Grade	%	3.5%	3.7%	3.8%	3.8%
Concentrate	tonnes	4,462	4,093	5,481	2,390
Grade	%	15.4%	15.6%	15.1%	15.1%
<b>Contained Nickel in Stockpiles</b>	tonnes	<b>4,820</b>	<b>4,413</b>	<b>4,510</b>	<b>3,317</b>

## Cash Costs

Financial Statistics	Unit	FY19				YTD Total
		Sep Qtr	Dec Qtr	Mar Qtr	Jun Qtr	
Group Production Cost/lb						
Mining Cost (*)	A\$/lb	2.24	2.38	2.11	2.24	2.24
Haulage	A\$/lb	0.07	0.07	0.06	0.07	0.07
Milling	A\$/lb	0.49	0.51	0.48	0.46	0.48
Admin	A\$/lb	0.22	0.22	0.20	0.22	0.22
By Product Credits	A\$/lb	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
<b>Cash Cost Ni in Con (**)</b>	A\$/lb	<b>2.99</b>	<b>3.15</b>	<b>2.82</b>	<b>2.96</b>	<b>2.98</b>
<b>Cash Cost Ni in Con (**)</b>	US\$/lb(**)	<b>2.19</b>	<b>2.26</b>	<b>2.01</b>	<b>2.07</b>	<b>2.13</b>
<b>Exchange Rate US\$ / A\$</b>		<b>0.73</b>	<b>0.72</b>	<b>0.71</b>	<b>0.70</b>	<b>0.72</b>

(\*) Mining Costs are net of deferred waste costs and inventory stockpile movements.

(\*\*) US\$ FX for Relevant Quarter is RBA average daily rate (Jun Qtr = A\$1:US\$0.70)

(\*\*\*) Payable terms are not disclosed due to confidentiality conditions of the offtake agreements. Cash costs exclude royalties and concentrate logistics costs.

Note: Grade and recovery estimates are subject to change until the final assay data are received.

The June quarter cash cost of production for nickel in concentrate (excluding smelting/refining charges, concentrate logistics and royalties) was A\$2.96/lb (US\$2.07/lb). The June quarter cost performance was in line with the full year average, noting a slight fall in average head grade reporting to the mill and an increase in Spotted Quoll mining costs as more ore is mined from the deeper "Stage 2" area of the mine, which attracts a higher haulage rate to surface than ore mined in the higher levels of the mine.

The year to date cost of production stands at A\$2.98/lb, around the mid-point of the full year guidance range.



## FORRESTANIA MINERAL RESOURCES AND ORE RESERVES

A full summary of the Company's Mineral Resource and Ore Reserve estimates is included at the end of this report.

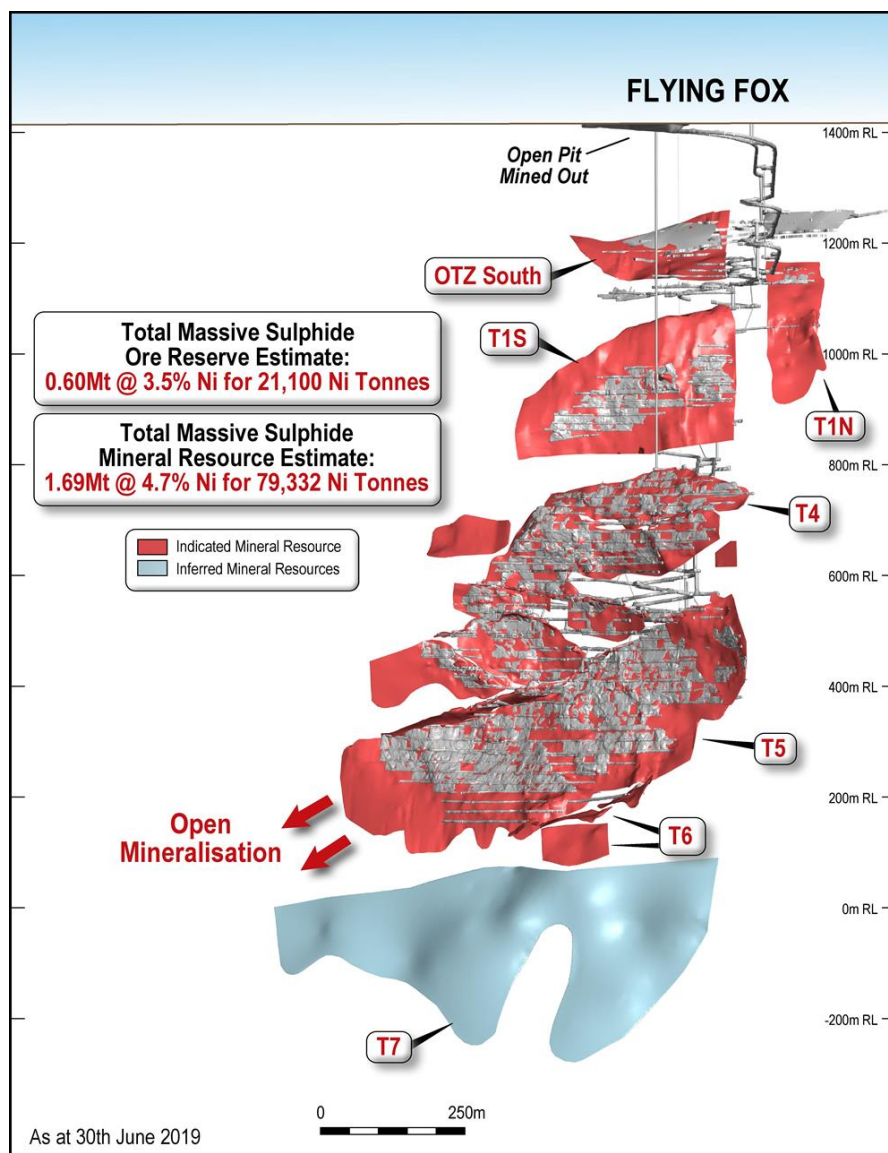
### FLYING FOX

Two resource extension drill-holes (642m) were completed north of the main dolerite dyke that forms the northern boundary of the existing resource. Both holes intersected matrix and disseminated mineralisation, but due to the low-grade tenor and disseminated nature of the mineralisation, no further drilling is planned for this area.

The Ore Reserve at quarter end has been updated with a comparison of the old (end of March 2019) and new (end of June 2019) reserve estimates as shown below:

Class	Old Reserve Estimate			Updated Reserve Estimate		
	Ore Tonnes (t)	Grade (Ni %)	Ni Tonnes (t)	Ore Tonnes (t)	Grade (Ni %)	Ni Tonnes (t)
Probable	660,117	3.3	21,500	601,100	3.5	21,100

There has been an overall net increase in life of mine Ore Reserve nickel tonnes for Flying Fox as a result of the grade increase in the Resource reported in the previous quarterly report. After allowing for mining depletion in the March Quarter, the new Ore Reserve is 21,100 nickel tonnes.



The technical and economic review of the lower grade ore, to assess heap leach suitability, continued during the quarter and is expected to be completed in the Sept quarter.

The Flying Fox **Massive Sulphide Mineral Resource**, including depletion to the end of June 2019, stands at **1.69Mt of ore at a grade of 4.7% Ni for 79,332 nickel tonnes**.

The Flying Fox **Massive Sulphide Ore Reserve**, including depletion to the end of June 2019, stands at **0.60Mt of ore at a grade of 3.5% Ni for 21,100 nickel tonnes**.



## SPOTTED QUOLL

The first phase of a resource extension drill program to investigate Stage 3 (below the T3 fault) mineralisation was completed during the quarter with 6,700m of directional diamond drilling (single 'parent' drill-hole and 10 'daughters'). Ten drill-holes reached the target elevation and intersected high tenor nickel sulphide mineralisation, thereby confirming that the Spotted Quoll orebody extends below the Stage 2 orebody and the T3 fault.

The overall grade increased from 2.6% Ni to 4.9% Ni, resulting in an 87% increase in contained nickel metal. The average thickness of the mineralised intersections was approximately 0.74m as a result of a hanging-wall and footwall felsic intrusions that stope out the ore in some areas.

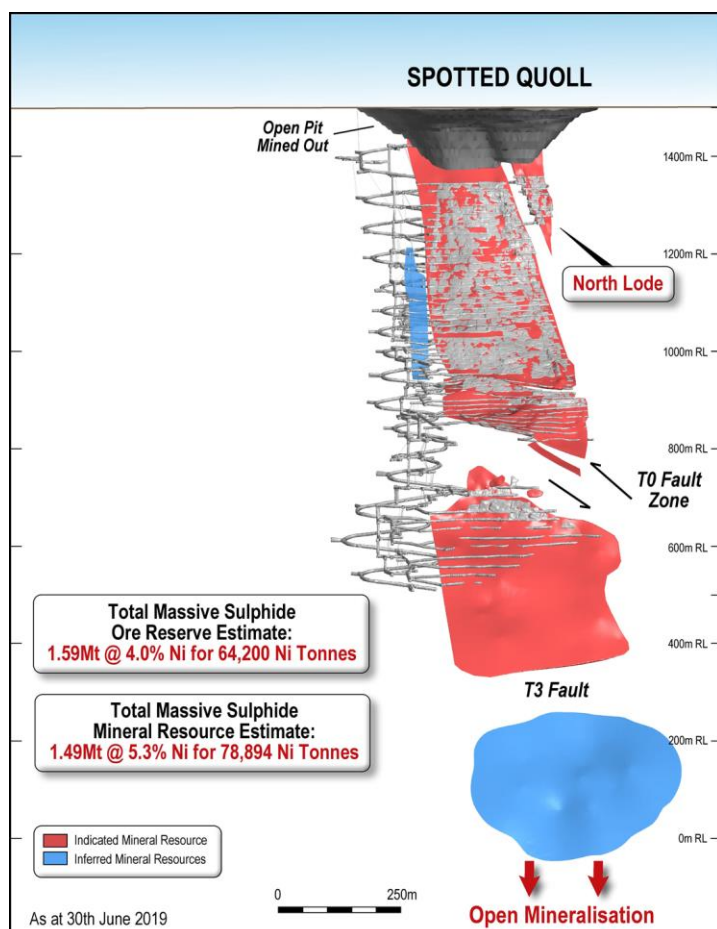
After reviewing the drill hole data, further surface drilling is currently being planned to test a thicker north-east trending mineralised plunge that appears to extend beyond the current resource limits.

The updated Stage 3 Inferred Mineral Resource is shown below:

RESCAT	Old Stage 3 Resource Estimate			Updated Stage 3 Resource Estimate		
	Ore Tonnes (t)	Grade (Ni %)	Ni Tonnes (t)	Ore Tonnes (t)	Grade (Ni %)	Ni Tonnes (t)
Inferred	116,367	2.6	3,060	118,464	4.9	5,745

The Ore Reserve was updated and a comparison of the old (end of March 2019) and new (end of June 2019) estimates is shown below:

RESCAT	Old Reserve Estimate			Updated Reserve Estimate		
	Ore Tonnes (t)	Grade (Ni%)	Ni Tonnes (t)	Ore Tonnes (t)	Grade (Ni%)	Ni Tonnes (t)
Proved	600	7.3	40			
Probable	1,498,500	4.0	59,750	1,598,000	4.0	64,200



The net gain in Reserves is due to an increase in overall thickness of the updated resource model and the inclusion of additional reserves.

The Spotted Quoll **Mineral Resource**, including depletion to the end of June 2019, stands at **1.49Mt of ore at a grade of 5.3% Ni for 78,894 nickel tonnes**.

The Spotted Quoll **Ore Reserve**, including depletion to the end of June 2019, stands at **1.59Mt of ore at a grade of 4.0% Ni for 64,200 nickel tonnes**.





## GROWTH PROJECTS

### COSMOS OPERATIONS

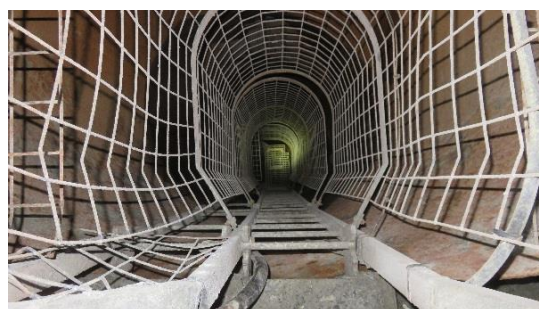
#### Odysseus Project

The early works program has been completed in-line with budget and cost targets (ASX release 5 July 2019) with several key milestones achieved:

- Decline rehabilitation completed down to the 10,000m RL pump station (500m below surface), with pump station mechanical and electrical designs complete;
- Dismantling of purchased shaft headgear and winder commenced and expedited in South Africa. Delivery to Perth expected in third quarter of FY2020, to support hoisting shaft operations;
- All required tenders and contracts for ongoing works awarded or substantially complete; and
- Successful recruitment of experienced Project Manager and Construction Manager with extensive shaft construction experience.



*Substantially dewatered Cosmos open-pit at end of June*



*Good condition dewatered escape-way ladder-ways*



*Centrifugal pumps final assembly in workshop*

#### Near-term Work Plan and Underground Infrastructure

Underground life of mine infrastructure works will continue in parallel with decline rehabilitation down to the AM5/6 orebodies and to the new take-off position for the Odysseus decline. Specific activities include:

- Construction and commissioning of the underground pump station (10,00m RL) and associated infrastructure early in the second quarter of FY2020;
- Rehabilitation of the Alec Mairs twin declines down to the new Odysseus decline take-off, (adjacent to the AM5/6 orebodies) in the third quarter FY2020;
- Delivery of the shaft headgear and winder from South Africa in the third quarter FY2020;
- Completion of the mining design for the AM5/6 deposits in the second quarter of FY2020; and
- A further 106 camp rooms to be upgraded (266 in total) during the first half of FY2020, to cater for increased construction activity.

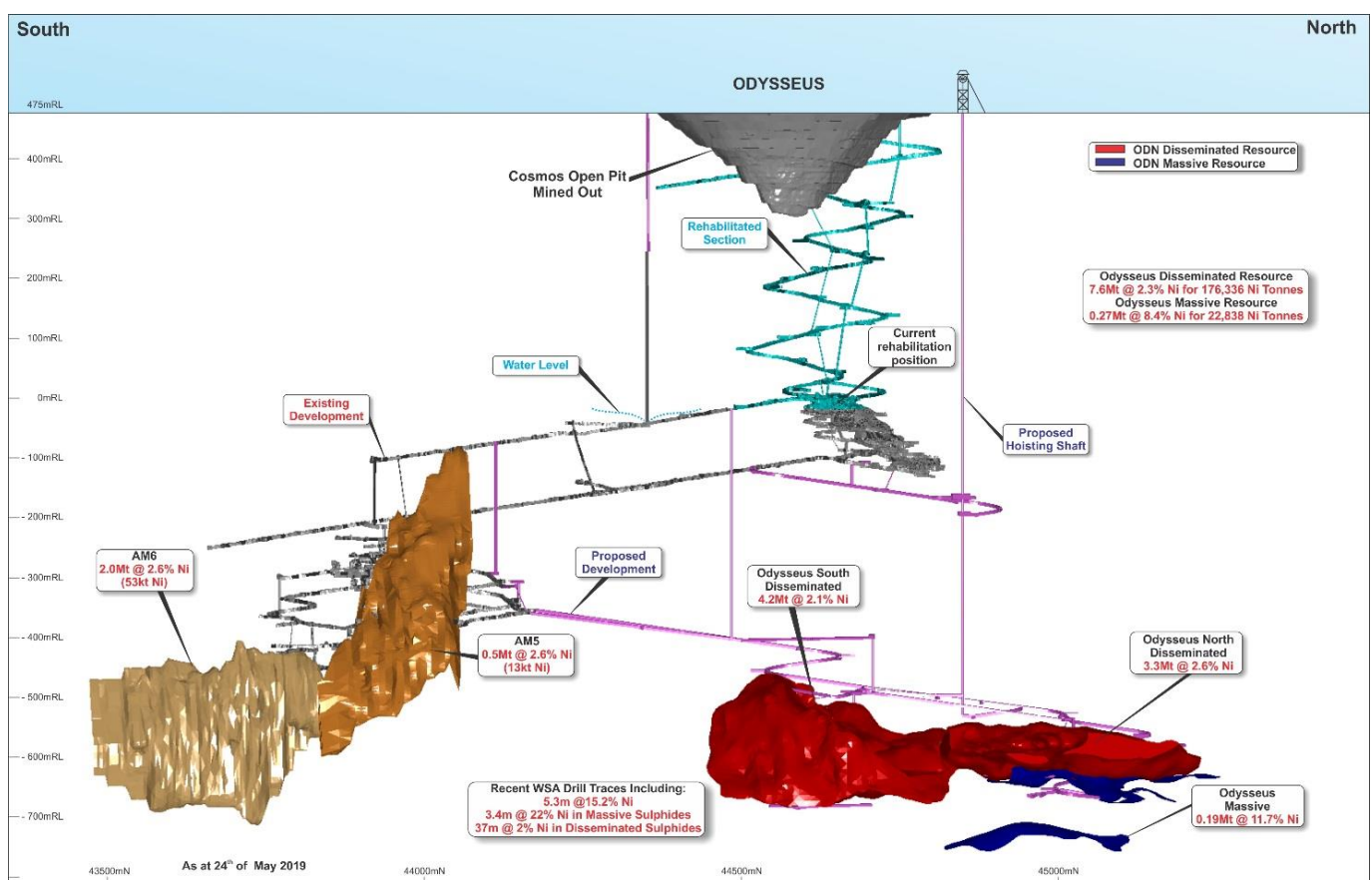




## Shaft Project Engineering and Site Construction

The project progressed well with key activities outlined below:

- Geotechnical logging of selected AM5/6 drill-cores started in May with completion expected in July;
- The shaft geotechnical drill-hole was successfully completed in the quarter (depth 1.2km), with deviation along the shaft axis within a 1.0m tolerance;
- The winder mechanical and electrical packages were awarded during the quarter, as well as a letter of intent (LOI) issued for the headframe structural package. Mobilisation of personnel to the South African mine-site has commenced;
- Following a successful heritage survey, the nearby Yakabindie sand deposit was drilled to test the resource extent and quality for use in paste fill; and
- A detailed engineering design (DED) of the shaft and materials handling systems were 43% complete at quarter end.





## MILL RECOVERY ENHANCEMENT PROJECT (MREP)

MREP optimisation work continued during the quarter with a summary below:

- The leaching circuit operated in continuous mode, with work continuing to improve overall leach recoveries closer to design criteria;
- Spot sales of the MREP product have continued with strong payabilities; and
- An optimisation project commenced to investigate the recovery of coarse un-leached nickel sulphides from the MREP tailings. As a result, a small de-slime unit has been manufactured and is planned to be installed early next quarter to recover the un-leached nickel into the concentrate stream. This is expected to boost the overall nickel recovery from the MREP plant.



*De-slime unit for MREP tailings being installed*

## Mill Scats

During the quarter, additional large-scale column testing commenced in the laboratory to investigate the solution chemistry and leaching solution flow-rates to assist with the design of the planned heap leach project. The heap leach pad design was completed, and thermodynamic modelling commenced to assist in estimating heap temperatures.

Project capital and operating cost estimates for a demonstration heap leach (approximately 20,000t of scats) will be prepared in the next quarter. The nickel rich solution from the heap leach can be added to the metal recovery circuit in the MREP plant.

## NEW MORNING/DAYBREAK PROJECT (NMDB)

The NMDB Feasibility Study continued and is summarised below:

- Further nickel oxide ore leaching test-work was conducted with expected completion early next quarter; and
- Metallurgical testing on the transition and primary zones is planned to commence next quarter.



## EXPLORATION

### OVERVIEW

Intensive on-ground drilling activities continued, with numerous targets drill tested at Western Gawler within the Iluka Farm-In and Joint Venture ground in South Australia.

At Forrestania, a seismic study of the Western Ultramafic Belt (centred on Spotted Quoll) commenced to assess the potential of modern seismic methods to assist future exploration targeting efforts;

At Cosmos, following the successful completion of a regionally extensive heritage survey last quarter, the Company recommenced exploration drilling, with drill testing underway at Ajax and several other exciting near-mine targets proposed for the upcoming quarter.

St George Mining received additional assay results from the Investigators Prospect late in the quarter, with planning for Phase 2, 2019 drilling also being finalised. Tenement E29/638 is in joint venture between St George Mining (SQG 75%) and Western Areas (WSA 25% free-carried).

### COSMOS

The Company has identified the 2.5km corridor extending between Prospero – Tapinos and Alec Mairs as being of notable exploration potential and strategic significance, with historical drilling intersecting both low-grade disseminated (Mt Goode style) and higher grade, basal-contact-proximal (Alec Mairs style) nickel sulphide mineralisation. In addition, the Company believes the interpreted ultramafic channel, which plays host to the Odysseus resource, is considerably under-explored along its northern flanks at Ajax (1km north of Odysseus) and its southern perimeter at Neptune (see attached long section).

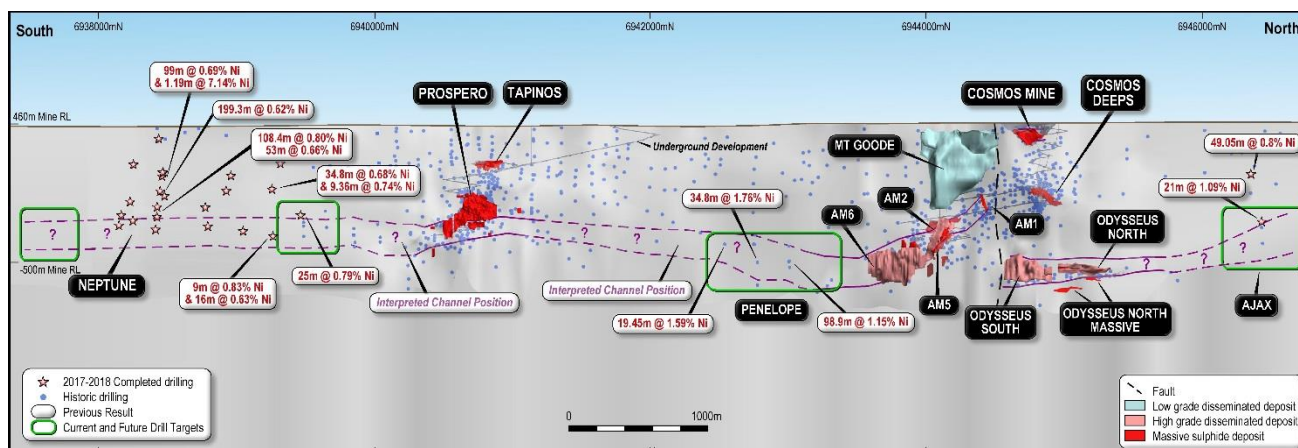
During the June quarter, and following the successful completion of a three-day heritage survey in late March, the Company received heritage clearance to support drilling activities at numerous sites within the Ajax and Penelope prospects. An additional set of proposed drill sites (covering areas south of Penelope and Neptune) is anticipated to receive formal approval during the September quarter, pending successful Section 18 outcomes.

### Ajax

Following heritage clearance, diamond drilling recommenced at Cosmos in May. The program at Ajax will comprise an initial program of three diamond holes designed to test the prospectivity of the Ajax area, 1km north of Odysseus, with one hole currently in progress. This program directly follows on from drilling completed in 2018, where one hole was completed (WCD023), returning a disseminated nickel sulphide intersection of 21m @ 1.09% Ni hosted within meso-cumulate to adcumulate ultramafic.

### Prospero – Tapinos to Alec Mairs (AM5 / AM6) Corridor

Planning has been completed for all proposed drill holes along this key corridor, with the main focus centred on the Penelope prospect, extending over a 1km target area and positioned approximately 500m south of the Alec Mairs resource complex. Drilling will commence early in the September quarter. The Company is very encouraged by the potential for this area to host significant accumulations of nickel sulphides, with historical drill holes identifying thick sequences of fertile cumulate ultramafic bodies with notable grades including 19.45m @ 1.59% Ni from BJD440A and 98.9m @ 1.15% Ni from BJD437C.







*Cosmos Long Section (Looking West)*

## FORRESTANIA

### Western Ultramafic Corridor

The 25km long Western Ultramafic Corridor, hosting the producing high-tenor nickel mines of Spotted Quoll and Flying Fox, together with the inventory of the New Morning resource, continues to represent a significant exploration opportunity for the discovery of additional nickel sulphide mineralisation.

The Company believes this corridor has the potential to host additional, likely blind, nickel sulphide mineralisation and will require the assistance of innovative methods of exploration to realise the full potential of the belt. In May the Company, in collaboration with HiSeis Pty Ltd, commenced a two-pronged study designed to identify the applicability of modern seismic to aid future exploration efforts across the Western Ultramafic Belt. The geological environment incorporating the Spotted Quoll mineral resource was identified as the most suitable for this work. Efforts in June focused on the collection of detailed physical property data (density and full waveform sonic) from representative drill core samples. This was coupled with the completion of a 1,300m downhole probe (also capturing full waveform sonic data) at Spotted Quoll.

Processing and analysis of this data, forward modelling and a review of the suitability of seismic as a targeting tool across the Western Ultramafic Belt will be completed in the September quarter.



*Full Waveform Logging (Drill Core and Downhole Probe)*

### Mt Hope (Gold)

A first phase 93-hole reverse circulation drill program across the Mt Hope region was completed in May, of which 62 holes (for 3,559m) were completed in the June quarter. The shallow program was designed to test several structural gold targets interpreted to be analogous in setting to mineralisation hosted within the Bounty Gold Camp located approximately 10km to the north. The assays showed weak to moderately mineralised zones within sheared high magnesian basalts. A second phase of drilling (delayed due to pending drill permit approvals) is planned to commence in the December quarter.

Exploration Results Gold – Mt Hope June Quarter 2019										
HOLE ID	Easting	Northing	RL	EOH	Type	Dip	Azimuth	Width (m)	Au g/t	From (m)
MHRC102	763813	6436411	399	60	RC	-60	90	5	1.06	38
	including							2	2.3	38
MHRC140	761382	6431893	407	60	RC	-60	90	4	0.54	20
MHRC142	761485	6431897	407	60	RC	-60	90	12	0.29	28





### **Kidman Resources Ltd Farm-in and Joint Venture (Lithium)**

On-ground work was limited to the collection of the final planned soil samples. This sampling consisted of extensional soil lines at Mt Hope (M77/389) along with completion of sampling at Teddy Bear (M77/324). Assays for these samples, as well as samples from Rokeby (M77/286) submitted late last quarter were returned, and analysis in a regional context completed. Minor Ta-Nb-Sn anomalism was returned at Mt Hope, and a drill programme is currently being contemplated. All soil samples on granted tenements have now been collected. Several JV tenements have soil sampling scheduled, pending DMIRS approvals.

Kidman has also progressed Programmes of Work (PoWs) with DMIRS to drill test soil anomalism at Birimbah (M77/542), and to follow up on previous lithium-tantalum pegmatite intersections at South Holland (M77/215). This has required independent flora and fauna studies of the drilling areas, and approval is expected ahead of drilling in the second half of 2019.

### **REGIONAL EXPLORATION (SOUTH AUSTRALIA)**

Regional airborne surveys, coupled with detailed on-ground EM and follow-up drilling campaigns over recent quarters, have resulted in a rapidly advancing understanding of the prospectively trends over the entire Western Gawler Project. This work, coupled with recent and ongoing litho-geochemical studies, has highlighted the importance of the Mystic to Woodford corridor (see map further below) as being an area of elevated focus for ongoing exploration targeting.

#### **Western Gawler (WSA 100%)**

Activities focused on data interpretation following the completion of several air-core drilling programmes during the quarter. Work also included geological interpretation (petrographic studies) and modelling of geophysical datasets to develop a depth to basement model and gravity levelling.

#### **Mystic Nickel Oxide Zone**

At Mystic, geological interpretation work completed during the quarter confirmed the presence of orthocumulate ultramafic dunite rocks containing trace level magmatic sulphides, which underlie the significant oxide intersections reported in the March quarter, with results that included 18m @ 2.06% Ni from hole 19WGAC444 (including 5m @ 4.29% Ni).

In the September quarter, an ultra-high detail, low-altitude aeromagnetic survey is planned for the Mystic corridor. The aim of this survey will be to refine our understanding of the extent of the ultramafic intrusive host rocks in this area.

#### **Strandline Farm-in and Joint Venture (WSA earning up to 90%) EL 5880**

During the quarter, Western Areas achieved a 90% interest in the Strandline Farm-in and Joint Venture Project after meeting the Stage 2 earn-in and expenditure requirement. Work during the quarter focused on the interpretation of EM datasets and drilling results completed in the previous quarter.

#### **Iluka Farm-in and Joint Venture (WSA earning up to 75%) EL 56251, EL5452, EL 5675, EL 5878 and EL5879.**

In July 2018, the Company announced an expansion of its Western Gawler exploration strategy via the execution of a Farm-in and Joint Venture Agreement with Iluka (Eucla Basin) Pty Limited. Building on momentum generated from recently completed drilling on 100% WSA ground, the Company has moved to establish a series of exploration programs across this Farm-In and Joint Venture ground.

Air-core drilling continued during the quarter with the completion of 136 drill holes (for 7,103m) at Woodford, Roskilde, ESSZ, Coachella, Splendour and Meredith. Drilling focused on targeting EM anomalies and expanding drilling coverage within existing target areas. The project area lies beneath sedimentary cover sequences of the Eucla Basin (average depth 45m) with systematic air-core drilling programs required to adequately evaluate geophysical targets.



## Woodford

At the Woodford Prospect, air-core drilling was completed along the strike length of the Woodford Intrusion. Encouraging geochemical anomalies were identified on the margins of the interpreted intrusion (see table below), with anomalous results returned including 1m @ 996ppm Cu, 685ppb Pt+Pd (PGE) and 0.12% Ni from 19WGAC493 within partially weathered ultramafic pyroxenite and 1m @ 549ppm Cu, 0.29% Ni within 19WGAC510.

### Exploration Results – Western Gawler June Quarter 2019

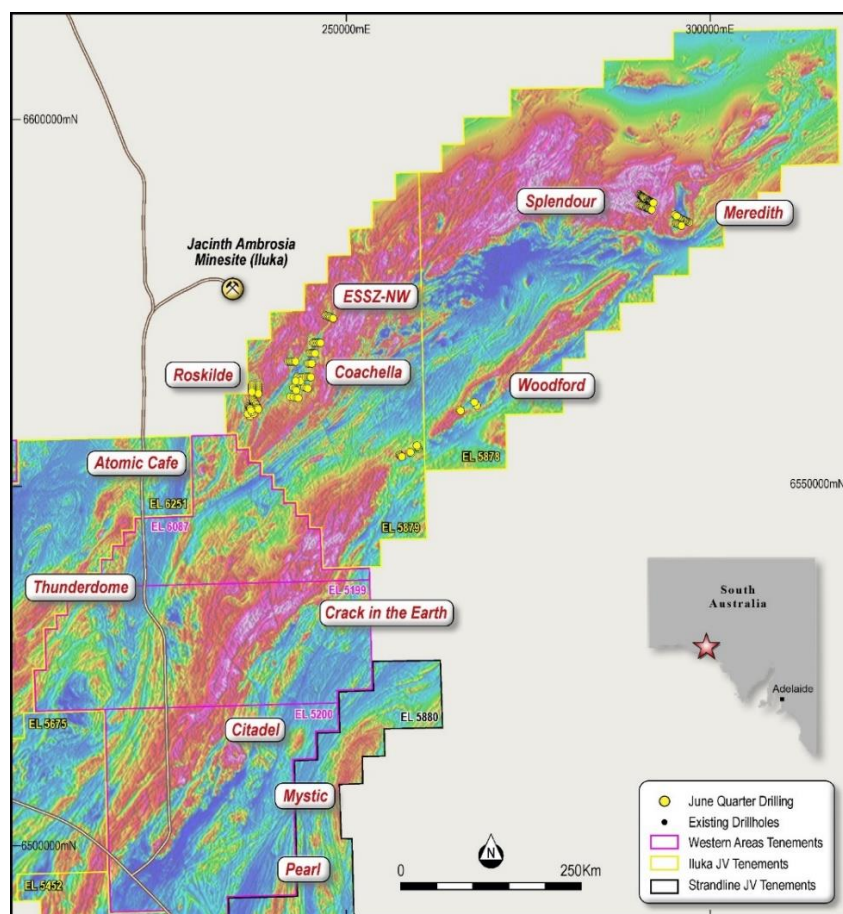
Hole ID	Easting	Northing	RL	EOH	Type	Dip	Azi	Width (m)	Ni %	Cu (ppm)	Pt+Pb (ppb)	From (m)
19WGAC493	268395	6564736	142	73	AC	-90	000	1	0.12	996	685	71
19WGAC497	268633	6564434	150	81	AC	-90	000	3	0.40	55	6	48
19WGAC510	268250	6562330	131	53	AC	-90	000	1	0.29	549	30	49
19WGAC521	266953	6562272	158	54	AC	-90	000	1	0.49	15	91	32

Further work at Woodford will include extensional and infill air-core drilling to further refine the identified target areas.

Drilling at Coachella, Roskilde and ESSZ intersected prospective mafic and ultramafic host rocks, however no anomalous results were reported in these areas.

## Meredith and Splendour

Late in the quarter, the exploration focus moved to the northern part of the project area, with air-core drilling commencing at the Meredith and Splendour prospects. Drilling and Moving Loop Electromagnetic (MLEM) surveys will continue into the September quarter, targeting several existing airborne EM and geochemical air-core anomalies. Assays from drilling completed to date are pending.



Western Gawler – June FY19 Quarter Activity



**-ENDS-**

**COMPETENT PERSON'S STATEMENT:**

The information within this report as it relates to mineral resources, ore reserves and exploration results is based on information compiled by Mr Andre Wulfse, Mr Marco Orunesu Preiata and Mr Graeme Gribbin of Western Areas Ltd. Mr Wulfse is a Fellow of AusIMM, Mr Orunesu Preiata is a member of AusIMM and Mr Gribbin is a member of AIG. Mr Wulfse, Mr Orunesu Preiata and Mr Gribbin are all full time employees of Western Areas. Mr Wulfse, Mr Orunesu Preiata and Mr Gribbin have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.' Mr Gribbin, Mr Wulfse and Mr Orunesu Preiata consent to the inclusion in the report of the matters based on the information in the form and context in which it appears.

**FORWARD LOOKING STATEMENT:**

This release contains certain forward-looking statements including nickel production targets. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production and expected costs.

Examples of forward looking statements used in this report include: "The early works programme at the Odysseus project was completed during the quarter, demonstrating the Company's commitment to this long life project that is expected to underpin Western Areas' long term nickel production", and, "The cash position is expected to be further enhanced, should a proposed change of control transaction for Kidman Resources Ltd complete during the coming quarter, with Western Areas anticipates it will receive A\$33.1m for its 17.4m shares in Kidman".

These forward-looking statements are subject to a variety of risks and uncertainties beyond the Company's ability to control or predict which could cause actual events or results to differ materially from those anticipated in such forward-looking statements. Western Areas Ltd undertakes no obligation to revise these forward-looking statements to reflect subsequent events or circumstances.

This announcement does not include reference to all available information on the Company and should not be used in isolation as a basis to invest in Western Areas Ltd. Potential investors should refer to Western Areas' other public releases and statutory reports and consult their professional advisers before considering investing in the Company.



## WESTERN AREAS ORE RESERVE AND MINERAL RESOURCE STATEMENT

	Tonnes	Grade Ni%	Ni Tonnes	Classification	JORC Code
<b>Ore Reserves</b>					
1. Flying Fox Area	601,100	3.5	21,100	Probable Ore Reserve	2012
2. Spotted Quoll Area	1,598,000	4.0	64,200	Probable Ore Reserve	2012
3. Diggers Area					
Digger South	2,016,000	1.4	28,950	Probable Ore Reserve	2004
Digger Rocks	93,000	2.0	1,850	Probable Ore Reserve	2004
<b>TOTAL FORRESTANIA ORE RESERVE</b>	<b>4,308,100</b>	<b>2.7</b>	<b>116,100</b>		
4. Cosmos area					
Odysseus South	4,483,700	1.9	85,620	Probable Ore Reserve	2012
Odysseus North	3,651,900	2.2	78,900	Probable Ore Reserve	2012
<b>TOTAL COSMOS ORE RESERVE</b>	<b>8,135,600</b>	<b>2.0</b>	<b>164,520</b>		
<b>TOTAL WESTERN AREAS ORE RESERVE</b>	<b>12,443,700</b>	<b>2.3</b>	<b>280,620</b>		
<b>Mineral Resources</b>					
1. Flying Fox Area					
T1 South	144,125	4.6	6,625	Indicated Mineral Resource	2012
T1 North	45,041	2.3	1,036	Inferred Mineral Resource	2012
OTZ Sth Massive Zone	54,217	5.1	2,736	Indicated Mineral Resource	2012
T4 Massive Zone	177,614	5.9	10,550	Indicated Mineral Resource	2012
T5 Massive Zone	212,835	5.8	12,364	Indicated Mineral Resource	2012
T5 Massive Zone + Pegs	722,890	5.3	37,955	Indicated Mineral Resource	2012
T6 Massive Zone	86,044	5.6	4,833	Indicated Mineral Resource	2012
T7 Massive Zone	248,720	1.3	3,233	Inferred Mineral Resource	2012
Total High Grade	1,691,486	4.7	79,332		
T5 Flying Fox Disseminated Zone	197,200	0.8	1,590	Indicated Mineral Resource	2004
T5 Lounge Lizard Disseminated Zone	357,800	1.0	3,460	Inferred Mineral Resource	2004
T5 Lounge Lizard Disseminated Zone	4,428,000	0.8	36,000	Indicated Mineral Resource	2004
Total Disseminated Flying Fox/Lounge Lizard	4,983,000	0.8	41,050		
Total FF/LL	6,674,486	1.8	120,382		
2. New Morning / Daybreak					
Massive Zone	340,126	3.3	11,224	Indicated Mineral Resource	2012
T5 Flying Fox Disseminated Zone	78,067	3.9	3,025	Inferred Mineral Resource	2012
T5 Lounge Lizard Disseminated Zone	2,496,658	1.3	32,498	Inferred Mineral Resource	2012
Total New Morning / Daybreak	6,233,319	1.4	87,928		
3. Spotted Quoll Area					
Spotted Quoll	146,678	5.0	7,228	Inferred Mineral Resource	2012
Total Spotted Quoll	1,488,644	5.3	78,894		
Beautiful Sunday	480,000	1.4	6,720	Indicated Mineral Resource	2004
Total Western Belt	14,876,449	2.0	293,924		
4. Cosmic Boy Area					
Cosmic Boy	180,900	2.8	5,050	Indicated Mineral Resource	2004
Seagull	195,000	2.0	3,900	Indicated Mineral Resource	2004
Total Cosmic Boy Area	375,900	2.4	8,950		
5. Diggers Area					
Diggers South - Core	2,704,500	1.4	37,570	Indicated Mineral Resource	2004
Digger South - Core	362,700	1.2	4,530	Inferred Mineral Resource	2004
Digger Rocks - Core	282,940	1.7	4,790	Indicated Mineral Resource	2004
Digger Rocks - Core	50,600	1.3	670	Inferred Mineral Resource	2004
Purple Haze	560,000	0.9	5,040	Indicated Mineral Resource	2004
Total Diggers Area	3,960,740	1.3	52,600		
<b>TOTAL FORRESTANIA MINERAL RESOURCE</b>	<b>19,213,089</b>	<b>1.9</b>	<b>355,474</b>		
6. Cosmos Area					
AM5	479,914	2.6	12,430	Indicated Mineral Resource	2012
AM5	26,922	1.9	509	Inferred Mineral Resource	2012
AM6	1,704,548	2.7	45,171	Indicated Mineral Resource	2012
AM6	329,443	2.5	8,203	Inferred Mineral Resource	2012
Odysseus South Disseminated	4,016,949	2.1	84,767	Indicated Mineral Resource	2012
Odysseus South - Core	219,641	2.0	4,302	Inferred Mineral Resource	2012
Odysseus North - Disseminated	3,128,943	2.6	81,156	Indicated Mineral Resource	2012
Odysseus North - Core	225,248	2.7	6,111	Inferred Mineral Resource	2012
Odysseus North - Massive	70,106	12.6	8,814	Indicated Mineral Resource	2012
Odysseus North - Massive	124,900	11.2	14,002	Inferred Mineral Resource	2012
Total Cosmos Area	10,326,614	2.6	265,465		
7. Mt Goode Area					
Mt Goode	13,563,000	0.8	105,791	Measured Mineral Resource	2012
Mt Goode	27,363,000	0.6	158,705	Indicated Mineral Resource	2012
Mt Goode	12,009,000	0.5	62,447	Inferred Mineral Resource	2012
Total Mt Goode Area	52,935,000	0.6	326,943		
<b>TOTAL COSMOS MINERAL RESOURCE</b>	<b>63,261,614</b>	<b>0.9</b>	<b>592,408</b>		
<b>TOTAL WESTERN AREAS MINERAL RESOURCE</b>	<b>82,474,703</b>	<b>1.1</b>	<b>947,882</b>		





## JORC 2012 TABLE 1 – FLYING FOX ORE RESERVE ESTIMATION

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> <li>▪ Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>▪ Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<p>Western Areas Ltd (WSA) undertook a review of the Flying Fox deposit (FF) during Financial year 2019 after the completion of the new drilling campaign. The underlying Mineral Resource was issued in March 2019 Quarterly Report.</p> <p>The Mineral Resources are reported inclusive of the Ore Reserves.</p>
Site visits	<ul style="list-style-type: none"> <li>▪ Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>▪ If no site visits have been undertaken indicate why this is the case.</li> </ul>	<p><i>Flying Fox is an operating underground mine since 2005. The Competent Person carries out routine site visits of the deposit and its infrastructures as part of normal working duties.</i></p> <p><i>WSA set up a data collection and record system to manage Flying Fox operation from a technical and economical point of view. All these data are used in the present Ore Reserves estimation.</i></p> <p><i>Mine design and mining method is based primarily on the recommendations laid out in the updated Feasibility study and back analysis data from the current mining practice.</i></p>
Study status	<ul style="list-style-type: none"> <li>▪ The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>▪ The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	<p><i>WSA completed in 2004 a Feasibility Study for T1 and in 2006 the Feasibility Study for T5. This last study has been updated and kept alive with the current practice and data coming from the experience gained in 14 years of mining and recorded in the company system documents.</i></p> <p><i>The present Ore Reserves estimation is an update that considers the new Mineral Resources, the performance of the operation to date and a revised commodity price estimate.</i></p>
Cut-off parameters	<ul style="list-style-type: none"> <li>▪ The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<p><i>An Ore Reserve cut-off grade of 1.5% Ni was selected to obtain an Ore Reserve that fits the following criteria:</i></p> <ul style="list-style-type: none"> <li>▪ Minimum Head Grade fitting the Mill requirements.</li> <li>▪ Ore Reserve average grade equal or greater than Life of Mine breakeven grade.</li> <li>▪ Mean Arsenic concentration that enables production of a saleable concentrate.</li> <li>▪ Positive LOM NPV</li> <li>▪ Maximise steady state production</li> <li>▪ LOM Nickel price curve from USD6.00/lb @ FX0.75 to USD7.50/lb @ FX 0.75.</li> </ul> <p><i>Some of the key ore reserve assumptions are considered commercially sensitive, however as the mine has been in operation for some years the reserve cut off parameters are developed using historical operating performance and statistics. More details regarding cut off parameters are reported in the following sections.</i></p>



<p>Mining factors or assumptions</p>	<ul style="list-style-type: none"> <li>▪ The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>▪ The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>▪ The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>▪ The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>▪ The mining dilution factors used.</li> <li>▪ The mining recovery factors used.</li> <li>▪ Any minimum mining widths used.</li> <li>▪ The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>▪ The infrastructure requirements of the selected mining methods.</li> </ul>	<p><i>The mining method used is a mix of direct AVOCA, reverse AVOCA long-hole stoping with bottom up sequence and rock and cemented rock fill above the 425 level. A long-hole top down sequence and paste filling of resultant voids is used below the 425 level.</i></p> <p><i>Mining Model has been realised with 5DPlanner and EPS Codes (Datamine software house). Mining factors have been selected using historical performance data of the deposit, particularly:</i></p> <ul style="list-style-type: none"> <li>▪ The Mineral Resource model used is in Datamine format. It combines the Resources models for Flying Fox mine and has been released in March 2019 Quarterly report.</li> <li>▪ The minimum mining width is 2.5 metres.</li> <li>▪ The max stable stope length is 20 metres with a stope height between 8 and 17 metres along dip. Other geotechnical parameters are contained in the current Ground Control Management Plan.</li> <li>▪ Stope Planned dilution is 0.5 metres in Hanging Wall and 0.25 meters in the foot Wall.</li> <li>▪ A halo of low-grade material averaging 0.4% Ni is used just for T5 area. No low grade halo is assigned to the material outside the other parts of Flying Fox. 0% Ni grade is assigned to the material outside the block model.</li> <li>▪ Stope Unplanned dilution (from hosting rock and fill) 6.0% in weight at 0 Ni%.</li> <li>▪ Standard SG for dilution is 2.8 t/m3.</li> <li>▪ Ore recovery is 98% in the stopes; and 100% in the ore drives.</li> <li>▪ Pillar factor for unplanned pillars is 2%.</li> <li>▪ Production rates reflect current mining performances and practice.</li> </ul> <p><i>No Inferred material has been utilised for the Ore Reserves estimation.</i></p> <p><i>Flying Fox is an operating mine. All infrastructures (with the exception of future capital development and external plants) are present and utilised on site, and allowance, based on technical studies, is made in the CAPEX expenditure of the Life of Mine for the new infrastructures.</i></p>
<p>Metallurgical factors or assumptions</p>	<ul style="list-style-type: none"> <li>▪ The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>▪ Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>▪ The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>▪ Any assumptions or allowances made for deleterious elements.</li> <li>▪ The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> </ul>	<p><i>The metallurgical factors used are from existing Cosmic Boy concentrator conventional nickel sulphide floatation techniques and historical data. Figures used are considered commercially sensitive by the company and may be made available by request.</i></p> <p><i>The metallurgical process is a well tested technology for Nickel Sulphides recovery with three stages of fragmentation with wet screening for size classification, one milling stage with cyclone size classification and two stages of flotation including Arsenic rejection. A small stream of the flotation feed is sent to the Hydrometallurgical section of the concentrator that uses the BioHeap® technology to improve the overall recovery</i></p> <p><i>The resultant concentrate is sold into existing off-take contracts with BHP and Tsingshan.</i></p>



	<ul style="list-style-type: none"> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	
Environmental	<ul style="list-style-type: none"> <li>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<p><b>The Flying Fox mining operations (FFO) operated by Western Areas Ltd (Western Areas), received final environmental approval to mine nickel sulphide ore as an underground operation in December 2004. Approvals were provided under Western Australian legislation; initially being the Mining Act 1978 (M Act) and later Part V of the Environmental Protection Act 1986 (EP Act). Since then, several other M Act approvals have been sought and received relating to the deepening of the Flying Fox mine and the extension of surface infrastructure required for mining operations. Additional approvals under Part V of the EP Act have also been sought in the form of Works Approvals and Prescribed Premises Licence amendments for various types of mining related infrastructure.</b></p> <p><b>Other relevant approvals from state and local government include endorsements to produce drinking water via reverse osmosis and store it onsite and licences to construct habitable buildings and construct and operate septic waste water treatment facilities.</b></p>
Infrastructure	<ul style="list-style-type: none"> <li>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</li> </ul>	<p><b>All necessary infrastructures for the Flying Fox mine are present and operational on site (not including future capital underground development and external plants). Allowance, based on technical studies, is made in the CAPEX expenditure of the Life of Mine for the new infrastructures planned in Life of Mine plan.</b></p> <p><b>Flying Fox is supplied by Western Power 33kV overhead power-line from the Bounty switchyard 60km to the north of the mine-site.</b></p> <p><b>Potable water is produced via RO plants located at CB concentrator and pumped via a pipeline to the mine-site. Process water is recycled from the mine dewatering network.</b></p> <p><b>Bulk material logistics is predominately via conventional truck haulage.</b></p> <p><b>Mine personnel reside at the nearby Cosmic Boy Village (529 rooms) and are predominately a FIFO (via CB airstrip) workforce with some minor DIDO.</b></p> <p><b>The mine-site is 80km to the east of the Hyden township and has two main gazetted gravel road accesses (east from Hyden and south from Varley)</b></p>
Costs	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> </ul>	<p><b>Capital Underground Development costs are derived from the LOM plan based on existing contracts and historical performance and data.</b></p> <p><b>All other Capital costs are sourced as necessary via quotes from suppliers or technical studies.</b></p> <p><b>Mining, processing, administration, surface transport, concentrate logistics and state royalty costs are based on existing cost estimates.</b></p> <p><b>The nickel price and FX assumptions used were sourced from industry standard sources</b></p> <p><b>Nickel price from USD6.00/lb @ FX0.75 to USD7.50/lb @ FX 0.75.</b></p> <p><b>Net Smelter Return (NSR) factors were sourced from existing concentrate off-take contracts.</b></p>



	<ul style="list-style-type: none"> <li>▪ The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>▪ The allowances made for royalties payable, both Government and private.</li> </ul>	
Revenue factors	<ul style="list-style-type: none"> <li>▪ The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>▪ the derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<p><i>These have been selected after consideration of historical commodity prices variations over time and the requirement for the Reserve to be robust to potentially volatile commodity price and foreign exchange conditions.</i></p> <p><i>The price setting mechanism for the sale of product subject to this report is traded openly on the London Metals Exchange ("LME").</i></p> <p><i>Potential penalties and net smelter revenue factors are included in the Smelter Return factor used. This factor is based on the historical data from previous FY and is considered commercially sensitive by the company. Figures may be produced by request.</i></p> <p><i>Two main selling contracts structures are currently used by Western Areas. One has copper as a co-product and the second doesn't have any co-product. Allowance for this selling parameter is included in the Smelter Return factor.</i></p>
Market assessment	<ul style="list-style-type: none"> <li>▪ The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>▪ A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>▪ Price and volume forecasts and the basis for these forecasts.</li> <li>▪ For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<p><i>The commodity subject to this report is traded openly on the London Metals Exchange ("LME").</i></p> <p><i>The Company has for many years maintained both long and short term offtake sales contracts with multiple customers, both locally and internationally.</i></p> <p><i>Existing contracts have been assessed for the sales volume assumptions.</i></p> <p><i>As the Company has been supplying multiple customers over a significant time period no acceptance testing has been assumed in the reserve development process.</i></p> <p><i>These contracts have fixed dates in which the contract itself is reviewed and/or expires. The assumption to extend these contracts and the current sold volumes to the end of LOM has been made in order to assess the Ore Reserve.</i></p> <p><i>For the Nickel price assumptions refer to the previous sections.</i></p>
Economic	<ul style="list-style-type: none"> <li>▪ The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>▪ NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<p><i>The Company has been operational for a significant period of time with contracts in place for ore mining, processing and concentrate haulage. Furthermore the operation, subject to this report, has an in-situ operating concentrator facility. As such the actual visible operating and contract rates (including rise and fall where appropriate) has been used in the NPV economic assessments. Figures are considered commercially sensitive by the company.</i></p> <p><i>The discount rate has been estimated as the weighted average cost of capital for the Company.</i></p>
Social	<ul style="list-style-type: none"> <li>▪ The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<p><i>All legal permits to mine Flying Fox have been obtained by Western areas following the paths described by the relevant laws with the participation of the local communities (see previous points).</i></p> <p><i>As a company policy (COR-HRM-POL-1122 -Social Responsibility Policy), the relations with the local communities and territories are a key part of operational management.</i></p>
Other	<ul style="list-style-type: none"> <li>▪ To the extent relevant, the impact of the following on the project and/or on</li> </ul>	<p><i>It is noted that mining operations are an inherently risky business in which to operate, no other risk factors apart from the normal risk</i></p>





	<p>the estimation and classification of the Ore Reserves:</p> <ul style="list-style-type: none"> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul>	<p><i>components included in all the above points and assumptions have been identified.</i></p>
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<p><b><i>Flying Fox has the following Ore Reserves at the 30<sup>th</sup> of June 2019:</i></b></p> <p><b><i>Probable Ore Reserves of 601,100 ore tonnes at 3.5% for 21,100 Nickel tonnes</i></b></p> <p><b><i>Ore reserves derive entirely from Indicated Mineral Resource and the result appropriately reflects the Competent Person's view of the deposit.</i></b></p>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<p><b><i>Audits/Reviews of the present report have not been done because of the high confidence in the data used and the constant performance of the operation. A review may be done by external request.</i></b></p>
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> <li>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic</li> </ul>	<p><b><i>The confidence in the present evaluation is from the fact that Flying Fox is a well establish operating mine with a sound performance database.</i></b></p> <p><b><i>The present estimation, for the nature of the commodity mined, refers to global market conditions (see above points for the assumptions).</i></b></p> <p><b><i>As is normal in mining operations, the key points that can have a significant impact on the performance of the Flying Fox Mine are the market conditions in general, and the Nickel price and the currency exchange rates in particular. All the other parameters are derived from sound historical production data.</i></b></p>



evaluation. Documentation should include assumptions made and the procedures used.

- Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.
- It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.



## JORC 2012 TABLE 1 – SPOTTED QUOLL ORE RESERVE ESTIMATION

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> <li>▪ Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>▪ Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<p><i>Western Areas Ltd (WSA) undertook a review of the Spotted Quoll deposit (SQ) during Financial year 2019 after the completion of the new drilling campaign. The underlying Mineral Resource was issued in March 2019 Quarterly Report.</i></p> <p><i>The Mineral Resources estimate is inclusive of the Ore Reserves.</i></p>
Site visits	<ul style="list-style-type: none"> <li>▪ Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>▪ If no site visits have been undertaken indicate why this is the case.</li> </ul>	<p><i>Spotted Quoll is an operating underground mine since 2010. The Competent Person carries out routine inspections of the mine-site and underground workings as part of his normal duties.</i></p> <p><i>WSA has established a fit-for-purpose data collection and record keeping system used by the technical staff to effectively manage the operation. This data is used in the present Ore Reserves estimation.</i></p> <p><i>Mine design and mining method is based primarily on the recommendations laid out in the updated Feasibility study and back analysis data from the current mining practice.</i></p>
Study status	<ul style="list-style-type: none"> <li>▪ The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</li> <li>▪ The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</li> </ul>	<p><i>WSA completed a SQ Feasibility Study in November 2010 as a continuation of the Spotted Quoll open pit (release 15<sup>th</sup> of December 2010). Underground mining commenced on the 2nd of May 2010 with firing the first portal face. The Feasibility Study is still valid and has been updated with the experience gained.</i></p> <p><i>The current Ore Reserve estimation is an update of a pre-existing reserve using the new Mineral Resource, updated modifying factors, mine performance KPI's and a revised commodity price estimate.</i></p>
Cut-off parameters	<ul style="list-style-type: none"> <li>▪ The basis of the cut-off grade(s) or quality parameters applied.</li> </ul>	<p><i>An Ore Reserve cut-off grade of 2% Ni was selected to obtain an Ore Reserve that fits the following criteria:</i></p> <ul style="list-style-type: none"> <li>▪ Minimum Head Grade fitting the Mill requirements.</li> <li>▪ Ore Reserve average grade equal or greater than Life of Mine breakeven grade.</li> <li>▪ Mean Arsenic concentration that enables production of a saleable concentrate</li> <li>▪ Positive LOM NPV</li> <li>▪ Maximise steady state production</li> <li>▪ LOM Nickel price curve from USD6.00/lb @ FX0.75 to USD7.50/lb @ FX 0.75.</li> </ul> <p><i>Some of the key ore reserve assumptions are considered commercially sensitive, however as the mine has been in operation for some years the reserve cut off parameters are developed using</i></p>



<p>Mining factors or assumptions</p>	<ul style="list-style-type: none"> <li>▪ The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>▪ The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>▪ The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>▪ The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>▪ The mining dilution factors used.</li> <li>▪ The mining recovery factors used.</li> <li>▪ Any minimum mining widths used.</li> <li>▪ The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>▪ The infrastructure requirements of the selected mining methods.</li> </ul>	<p><i>historical operating performance and statistics. More details regarding cut off parameters are reported in the following sections.</i></p> <p><i>The mining method used is predominantly longhole stoping with a top down sequence and paste filling of resultant voids.</i></p> <p><i>The mining model used 5DPlanner and EPS Codes (CAE software house). Mining factors have been selected using historical performance data of the deposit, particularly:</i></p> <ul style="list-style-type: none"> <li>▪ The Mineral Resource model used is in Datamine format. It combines the Resources models for Spotted Quoll mine and has been released in March 2019 Quarterly report.</li> <li>▪ The minimum mining width is 2.0 metre.</li> <li>▪ The average stable stope length is between 20 and 30 metres with a stope height between 7 and 15 metres. Other geotechnical parameters are contained in the current Ground Control Management Plan.</li> <li>▪ Stope Hanging Wall planned dilution is 0.50 metres and Foot Wall planned dilution is from 0.1 to 0.2 metres at 0.4 Ni%.</li> <li>▪ Stope Unplanned dilution (including hosting rock and paste dilution) is included in the stope design shapes at 0 Ni%.</li> <li>▪ 0% Ni grade is assigned to the material outside the block model.</li> <li>▪ Ore recoveries range from 98% in the stopes and 100% in the ore drives.</li> <li>▪ Pillar factor for unplanned pillars is 0%.</li> <li>▪ Production rates reflect current mining performances and practice.</li> <li>▪ Standard SG for dilution is 2.8t/m<sup>3</sup>.</li> </ul> <p><i>No Inferred material has been utilised for the Ore Reserves estimation.</i></p> <p><i>Spotted Quoll is an operating mine with existing infrastructure and planned extensions included in the LOM plan.</i></p>
<p>Metallurgical factors or assumptions</p>	<ul style="list-style-type: none"> <li>▪ The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li> <li>▪ Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>▪ The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>▪ Any assumptions or allowances made for deleterious elements.</li> <li>▪ The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>▪ For minerals that are defined by a specification, has the ore reserve estimation been based on the</li> </ul>	<p><i>The metallurgical factors used are from the existing Cosmic Boy Concentrator (CBC) using conventional nickel sulphide flotation techniques combined with historical operating performance data. These factors are considered commercially sensitive and may be made available on request.</i></p> <p><i>The metallurgical process is a well tested technology for Nickel Sulphides recovery with three stages of fragmentation with wet screening for size classification, one milling stage with cyclone size classification and two stages of flotation including Arsenic rejection. A small stream of the flotation feed is sent to the Hydrometallurgical section of the concentrator that uses the BioHeap® technology to improve the overall recovery.</i></p> <p><i>The resultant concentrate is sold into existing off-take contracts with BHP and Tsingshan.</i></p>





	appropriate mineralogy to meet the specifications?	
Environmental	<ul style="list-style-type: none"> <li>The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.</li> </ul>	<p><b>Spotted Quoll open pit mine received final environmental approval in October 2009. Approvals were provided under both Western Australian legislation; principally being Parts IV and V of the Environmental Protection Act 1986 (EP Act) and the Mining Act 1978 (M Act) and Commonwealth legislation being the Environment Protection and Biodiversity Conservation Act 1999, (EPBC Act). Environmental approval has also been received, to mine Nickel sulphide ore from the underground extension of the Spotted Quoll open cut mine under Western Australian legislation being principally Parts IV and V of the EP Act and the M Act. No further approval was required from the Commonwealth for underground mining at Spotted Quoll.</b></p> <p><b>A list of Key State and Commonwealth approvals obtained for both the Spotted Quoll open pit and the underground operations may be made available by request.</b></p>
Infrastructure	<ul style="list-style-type: none"> <li>The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.</li> </ul>	<p><b>Spotted Quoll is an operating mine with adequate infrastructure and planned future capital project extensions are included in the LOM plan.</b></p> <p><b>Spotted Quoll is supplied by Western Power 33kV overhead power-line from the Bounty switchyard 60km to the north of mine-site.</b></p> <p><b>Potable water is produced via RO plants located at CB concentrator and pumped via a pipeline to the mine-site. Process water is recycled from the mine dewatering network.</b></p> <p><b>Bulk material logistics is predominately via conventional truck haulage.</b></p> <p><b>Mine personnel reside at the nearby Cosmic Boy Village (529 rooms) and are predominately a FIFO (via CB airstrip) workforce with some minor DIDO.</b></p> <p><b>The mine-site is 80km to the east of the Hyden township and has two main gazetted gravel road accesses (east from Hyden and south from Varley)</b></p>
Costs	<ul style="list-style-type: none"> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> </ul>	<p><b>Capital Underground Development costs are derived from the LOM plan based on existing contracts and historical performance and data.</b></p> <p><b>All other Capital costs are sourced as necessary via quotes from suppliers or technical studies.</b></p> <p><b>Mining, processing, administration, surface transport, concentrate logistics and state royalty costs are based on existing cost estimates.</b></p> <p><b>The nickel price and FX assumptions used were sourced from industry standard sources</b></p> <p><b>Nickel price from USD6.00/lb @ FX0.75 to USD7.50/lb @ FX 0.75.</b></p> <p><b>Net Smelter Return (NSR) factors were sourced from existing concentrate off-take contracts.</b></p>



	<ul style="list-style-type: none"> <li>▪ The allowances made for royalties payable, both Government and private.</li> </ul>	
Revenue factors	<ul style="list-style-type: none"> <li>▪ The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>▪ the derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	<p><i>These have been selected after consideration of historical commodity prices variations over time and the requirement for the Reserve to be robust to potentially volatile commodity price and foreign exchange conditions.</i></p> <p><i>The price setting mechanism for the sale of product subject to this report is traded openly on the London Metals Exchange ("LME").</i></p> <p><i>Potential penalties and net smelter revenue factors are included in the Smelter Return factor used. This factor is based on the historical data from previous FY's and is considered commercially sensitive by the company and may be made available on request.</i></p> <p><i>Two main selling contracts structures are currently used by Western Areas. One has copper as a co-product and the second doesn't have any co-product. Allowance for this selling parameter is included in the Smelter Return factor.</i></p>
Market assessment	<ul style="list-style-type: none"> <li>▪ The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>▪ A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>▪ Price and volume forecasts and the basis for these forecasts.</li> <li>▪ For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<p><i>The commodity subject to this report is traded openly on the London Metals Exchange ("LME").</i></p> <p><i>The Company has for many years maintained both long and short term off-take sales contracts with multiple customers, both locally and internationally.</i></p> <p><i>Existing contracts have been assessed for the sales volume assumptions.</i></p> <p><i>As the Company has been supplying multiple customers over a significant time period no acceptance testing has been assumed in the reserve development process.</i></p> <p><i>These contracts have fixed dates in which the contract itself is reviewed and/or expires. The assumption to extend these contracts and the current sold volumes to the end of LOM has been made in order to assess the Ore Reserve.</i></p> <p><i>Refer to the previous section for nickel price assumptions.</i></p>
Economic	<ul style="list-style-type: none"> <li>▪ The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>▪ NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<p><i>The Company has been operational for a significant period of time with contracts in place for ore mining, processing and concentrate haulage. Furthermore the operation, subject to this report, has an in-situ operating concentrator facility. As such the actual visible operating and contract rates (including rise and fall where appropriate) has been used in the NPV economic assessments. Figures are considered commercially sensitive by the company.</i></p> <p><i>The discount rate has been estimated as the weighted average cost of capital for the Company.</i></p>
Social	<ul style="list-style-type: none"> <li>▪ The status of agreements with key stakeholders and matters leading to social licence to operate.</li> </ul>	<p><i>All legal permits to mine Spotted Quoll have been obtained by Western areas following the paths described by the relevant laws with the participation of the local communities (see previous points).</i></p> <p><i>As a company policy (COR-HRM-POL-1122 -Social Responsibility Policy), the relations with the local communities and territories are a key part of operational management.</i></p>
Other	<ul style="list-style-type: none"> <li>▪ To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> </ul>	<p><i>It is noted that mining operations are an inherently risky business in which to operate, no other risk factors apart from the normal risk components included in all the above points and assumptions have been identified.</i></p>



	<ul style="list-style-type: none"> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</li> </ul>	
Classification	<ul style="list-style-type: none"> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</li> </ul>	<p><b><i>Spotted Quoll has the following reserves at the 30<sup>th</sup> of June 2019:</i></b></p> <ul style="list-style-type: none"> <li><b><i>Probable Ore Reserves: 1,598,000 ore tonnes at 4.0% Ni for 64,200 Nickel tonnes</i></b></li> </ul> <p><b><i>The ore reserve generated appropriately reflects the Competent Person's view of the deposit.</i></b></p>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Ore Reserve estimates.</li> </ul>	<p><b><i>Audits/Reviews of the present report have not been done because of the high confidence in the data used and the constant performance of the operation. A review may be done by external request.</i></b></p>



Discussion of relative accuracy/confidence

- Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.
- The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
- Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.
- It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

*The confidence in the present evaluation is based on Spotted Quoll being a well established operating mine with a mature performance database.*

*The present estimation, for the nature of the commodity mined, refers to global market conditions (see above points for the assumptions).*

*As is normal in mining operations, the key points that can have a significant impact on the performance of the Spotted Quoll Mine are the market conditions in general, and the Nickel price and the currency exchange rates in particular. All the other parameters are derived from sound historical production data.*

## JORC 2012 TABLE 1 – COSMOS NICKEL COMPLEX EXPLORATION

### SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>▪ Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken</li> </ul>	<ul style="list-style-type: none"> <li>▪ Exploration targets were tested and sampled from diamond drilling (DD) core, and holes were mostly drilled perpendicular to the strike (north-south) of the stratigraphy.</li> <li>▪ Drill holes were located initially with hand held GPS and later surveyed by differential GPS. DD holes were used to obtain high quality samples that were fully oriented and logged for lithological, structural, geotechnical attributes. Each sample of diamond drill core submitted to ALS laboratories at Malaga, Perth was weighed to determine density by the weight in air, weight in</li> </ul>





	as limiting the broad meaning of sampling.	<p>water method. All sampling was conducted under WSA QAQC protocols which are in accordance with industry best practice.</p> <ul style="list-style-type: none"> <li>▪ Diamond drill core (NQ2) is 1/4 core sampled on geological intervals (0.2m - 1.5m) to achieve sample weights under 2kgs.</li> <li>▪ Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by 4 acid digest with an ICP/AES and FA/ICP (Au, Pt, Pd) finish.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All samples were prepared and assayed by independent commercial laboratories whose instruments are regularly calibrated</li> <li>▪ Geophysical survey QC parameters were reviewed by independent supervising geophysicists from Newexco Services Pty Ltd</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Diamond core is typically marked at 1m intervals</li> <li>▪ Sample intervals marked up by geologists based on geology.</li> <li>▪ Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>▪ Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Diamond Drilling utilized a UDR1200 rig</li> <li>▪ Diamond drilling comprises HQ and NQ2 sized core.</li> <li>▪ Historical data is derived from both surface and underground diamond drilling</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>▪ Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>▪ Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>▪ Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Diamond core recoveries have been logged and recorded in the database</li> <li>▪ Diamond core are logged and recorded in the database. Overall recoveries are &gt;95% and there was no core loss issues or significant sample recovery problems. Core loss is noted where it occurs.</li> <li>▪ Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers.</li> <li>▪ RC recoveries are logged and recorded in the database and RC samples were visually checked for recovery, moisture and contamination. Drilling close to the lake shore for the Neptune drilling resulted in high water flows which reduced the sample size and loss of fines from the sample.</li> </ul>



		<ul style="list-style-type: none"> <li>The drilling by diamond core method has high recoveries. The massive sulphide style of mineralisation and the consistency of the mineralised intervals are considered to preclude any issue of sample bias due to material loss or gain.</li> <li>Drilling in the oxidised profile results in more incomplete core recoveries.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> </ul>	<ul style="list-style-type: none"> <li>All geological logging was carried out to a high standard using well established geology codes in LogChief software.</li> <li>All logging recorded in a Panasonic Toughbook PC.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul style="list-style-type: none"> <li>Core is photographed in both dry and wet form and logging is done in detail.</li> </ul>
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All diamond drill holes were logged and photographed in full. RC holes are logged in full.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core is sampled as quarter core only; cut by the field crew on site by diamond saw.</li> </ul>
	<ul style="list-style-type: none"> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul style="list-style-type: none"> <li>RC samples were collected on the rig using cone splitters. Composite samples are collected via riffle splitting or spearing to generate a single sample of less than 3kg.</li> </ul>
	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <li>Sample preparation follows industry best practice involving oven drying, coarse crushing and pulverising.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>The field crew prepares and inserts the QAQC certified reference materials into the relevant calico bags.</li> <li>OREAS and Geostats standards have been selected based on their grade range and mineralogical properties, with approximately 12 different standards used.</li> </ul>
	<ul style="list-style-type: none"> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	<ul style="list-style-type: none"> <li>Standards and blanks are inserted approximately every 20 samples or at least one every hole for both diamond and RC drilling.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>All geological logging was carried out to a high standard using well established geology codes in LogChief software.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	<ul style="list-style-type: none"> <li>All samples are assayed by independent certified commercial laboratories.</li> <li>The laboratories used are experienced in the preparation and analysis of nickel sulphide ores.</li> </ul>
	<ul style="list-style-type: none"> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations</li> </ul>	<ul style="list-style-type: none"> <li>No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE or exploration reporting purposes.</li> </ul>



	factors applied and their derivation, etc.	
	<ul style="list-style-type: none"> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Certified reference materials are included in all batches dispatched at an approximate frequency of 1 per 25 samples, with a minimum of two per batch.</li> <li>Field duplicates are inserted into submissions at an approximate frequency of 1 in 25, with placement determined by Nickel grade and homogeneity. Lab checks, both pulp and crush, are taken alternately by the lab at a frequency of 1 in 25.</li> <li>Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots.</li> <li>Evaluations of standards are completed on a monthly, quarterly and annual basis using QAQCR.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>Geological interpretation using intersections peer viewed by prior company and WSA geologists.</li> </ul>
	<ul style="list-style-type: none"> <li>The use of twinned holes.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
	<ul style="list-style-type: none"> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>All primary geophysical data were recorded digitally and sent in electronic format to Newexco Services Pty Ltd for quality control and evaluation.</li> <li>All geological logging was carried out to a high standard using well established geology codes in LogChief software.</li> <li>All other data including assay results are imported via Datashed software.</li> <li>Drillholes, sampling and assay data is stored in a SQL Server database located in a dedicated data center.</li> </ul>
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>none</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> </ul>	<ul style="list-style-type: none"> <li>Downhole surveys completed using the Axis "Champ Gyro™" north seeking gyroscopic instrument on all resource definition and Exploration diamond holes. Exploration RC holes were surveyed down-hole using an Eastman single shot camera. Underground drill-hole collar locations verified via survey pickup.</li> </ul>
	<ul style="list-style-type: none"> <li>Specification of the grid system used.</li> </ul>	<ul style="list-style-type: none"> <li>MGA94 Zone 51 grid coordinate system is used.</li> <li>A two point transformation is used to convert the data from AMG84_51 mine grid and vice versa.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>The project area is flat and the topographic data density is adequate for MRE purposes</li> <li>Collar positions were picked up by suitably qualified surface and underground surveyors</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Drill hole spacing at Neptune is varied according to nature of target type. Where initial drilling was undertaken holes are nominally 250m to 400m apart. Where mineralisation is identified holes are spaced at an approx 100m to 200m spacing.</li> <li>For other projects, drill spacing will vary based on the target being tested.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral</li> </ul>	<ul style="list-style-type: none"> <li>Samples are collected at 1m intervals (Diamond and Aircore) and 4m composites (RC)</li> </ul>



	Resource and Ore Reserve estimation procedure(s) and classifications applied.	
	<ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Sampling compositing has been applied to some of the RC sampling (2m to 4m). Where significant results are intersected, RC samples will be broken into 1m intervals.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the drill holes are orientated to achieve intersection angles as close to perpendicular as possible. The steep dipping nature of the stratigraphy at some targets (70° to 80°) means this is not always achieved.</li> </ul>
	<ul style="list-style-type: none"> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>No orientation based sampling bias has been observed in the data, intercepts are reported as downhole lengths.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Standard West Australian mining industry sample security measures were observed.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by the Company.</li> </ul>

## JORC 2012 TABLE 1 – COSMOS NICKEL COMPLEX EXPLORATION

### SECTION 2: REPORTING OF EXPLORATION RESULTS

(Criteria listed in Section 1, also apply to this section.)

Criteria	JORC Code Explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>Cosmos Nickel Complex comprises 26 tenements covering some 9,226Ha. The tenements include mining leases and miscellaneous licenses</li> <li>Western Areas wholly owns 23 tenements, which were acquired from Xstrata Nickel Australasia in October 2015. The remainder of the tenements (3) are subject to a Joint Venture with Alkane Resources NL, where Western Areas has earned 80.6% interest</li> <li>All tenements are in good standing</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Historical nickel exploration has been completed by Glencore PLC, Xstrata Nickel Australasia and Jubilee Mines NL</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The deposits form part of the Cosmos Nickel Complex, which lies within the Agnew-Wiluna Belt of the central Yilgarn Craton, Western Australia</li> <li>The deposit style is komatiite hosted, disseminated to massive nickel sulphides.</li> <li>The mineralisation typically occurs in association with the basal zone of high MgO cumulate ultramafic rocks.</li> </ul>





		<ul style="list-style-type: none"><li>Many of the higher grade ore bodies in the Cosmos Nickel Complex also show varying degrees of remobilisation, and do not occur in a typical mineralisation profile</li></ul>																								
Drill hole Information	<ul style="list-style-type: none"><li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:<ul style="list-style-type: none"><li>easting and northing of the drill hole collar</li><li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li><li>dip and azimuth of the hole</li><li>down hole length and interception depth</li><li>hole length.</li></ul></li><li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li></ul>	<ul style="list-style-type: none"><li>Drill hole summary details supporting reported intersections from the Neptune Project are captured in the enclosed table.</li></ul> <table><tr><th>HOLEID</th><th>Easting</th><th>Northing</th><th>RL</th><th>EOH Depth (m)</th><th>Type</th><th>DIP</th><th>Azimuth</th></tr><tr><td>WCD025</td><td>261181</td><td>6946597</td><td>489</td><td>917</td><td>DD</td><td>-64</td><td>266</td></tr><tr><td>WCD026</td><td>261705</td><td>6935337</td><td>460</td><td>963</td><td>DD</td><td>-55</td><td>303</td></tr></table>	HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	WCD025	261181	6946597	489	917	DD	-64	266	WCD026	261705	6935337	460	963	DD	-55	303
HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth																			
WCD025	261181	6946597	489	917	DD	-64	266																			
WCD026	261705	6935337	460	963	DD	-55	303																			
Data aggregation methods	<ul style="list-style-type: none"><li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li><li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li><li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li></ul>	<ul style="list-style-type: none"><li>Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation.</li><li>The reported assays have been length and bulk density weighted. A lower arbitrary 0.5% Ni cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals.</li><li>Metal equivalents have not been used</li></ul>																								
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"><li>These relationships are particularly important in the reporting of Exploration Results.</li><li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li><li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. ‘down hole length, true width not known’).</li></ul>	<ul style="list-style-type: none"><li>Drill hole intersections may not be true widths</li></ul>																								



<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Included within report</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>All relevant assay results have been reported</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Included within report</li> <li>Geophysics</li> <li>Information on structure type, dip, dip direction alpha and beta angles, texture, shape, roughness and fill material is stored in the structural logs in the database.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Preliminary plans are included within the report</li> <li>Future explorations programs may change depending on results and strategy</li> </ul>

## JORC 2012 TABLE 1 – FORRESTANIA EXPLORATION

### SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code Explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration targets were tested and sampled from reverse circulation (RC) chips, and holes were mostly drilled perpendicular to the strike (north-south) of the stratigraphy.</li> <li>Drill holes were located initially with hand held GPS and later surveyed by differential GPS. RC sample chips are submitted to ALS laboratories at Malaga, Perth was weighed to determine density by the weight in air, weight in water method. All sampling was conducted under WSA QAQC protocols which are in accordance with industry best practice.</li> </ul>



	<ul style="list-style-type: none"> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were prepared and assayed by independent commercial laboratories whose instruments are regularly calibrated.</li> </ul>
	<ul style="list-style-type: none"> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Sampled mineralisation intervals are sent to a commercial laboratory for crushing and grinding before assaying.</li> <li>RC holes were sampled initially as 4m composites, with follow up 1m samples captured pending the return of significant assay results.</li> <li>Samples were crushed, dried and pulverised (total prep) to produce a sub sample for analysis by 4 acid digest with an ICP/AES and FA/ICP (Au, Pt, Pd) finish.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Reverse Circulation (RC) utilized an Atlas Copco ROC L8</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling recoveries are digitally logged, recorded and captured within the project database.</li> <li>Overall recoveries are &gt;95% and there has been no significant loss of sample material due to ground or drilling issues.</li> <li>Each individual sample is visually checked and logged for recovery, moisture and contamination.</li> <li>The style of expected mineralisation and the consistency of the mineralised intervals are expected to preclude any issue of sample bias due to material loss or gain.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Geological logging is recorded and validated in MS excel spreadsheets (Toughbook platform)</li> <li>Drill chips are logged for lithology, mineralogy, mineralisation, weathering, fabric, grain size, colour and other relevant features.</li> <li>Geotechnical logging was not completed due to the nature of drill method.</li> <li>All holes have been logged from the surface to the end of hole.</li> <li>Petrology is used to verify the field geological logging.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> </ul>	<ul style="list-style-type: none"> <li>The drill samples were collected every metre on the drill rig using a rotary splitter.</li> </ul>



	<ul style="list-style-type: none"> <li>▪ If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>▪ For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>▪ Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>▪ Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>▪ Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>▪ When required, composite samples are taken using a sampling spear.</li> <li>▪ Field QC procedures involve the use of certified reference material as assay standards, along with blanks, duplicates and barren washes. The insertion rate of these averaged 1:20, with an increased rate in mineralised zones.</li> <li>▪ Field duplicates are conducted on approximately 1 in 25 drill intersections.</li> <li>▪ The sample sizes are considered to be appropriate to correctly represent the geological model based on: the style of mineralisation, the thickness and consistency of the expected intersections, the sampling methodology and percent value assay ranges for the primary elements.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>▪ The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All samples are assayed by independent certified commercial laboratories.</li> <li>▪ The laboratories used are experienced in the preparation and analysis of nickel sulphide ores.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No Geophysical tools or handheld XRF instruments were used to determine any element concentrations that were subsequently used for MRE or exploration reporting purposes.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Certified reference materials are included in all batches dispatched at an approximate frequency of 1 per 25 samples, with a minimum of two per batch.</li> <li>▪ Field duplicates are inserted into submissions at an approximate frequency of 1 in 25, with placement determined by Nickel grade and homogeneity. Lab checks, both pulp and crush, are taken alternately by the lab at a frequency of 1 in 25.</li> <li>▪ Accuracy and precision were assessed using industry standard procedures such as control charts and scatter plots.</li> <li>▪ Evaluations of standards are completed on a monthly, quarterly and annual basis using QAQCR.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>▪ The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Geological interpretation using intersections peer viewed by prior company and WSA geologists.</li> </ul>
	<ul style="list-style-type: none"> <li>▪ The use of twinned holes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable for this program</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All primary geophysical data were recorded digitally and sent in electronic format to Newexco Services Pty Ltd for quality control and evaluation.</li> <li>▪ All geological logging was carried out to a high standard using well established geology codes in LogChief software.</li> <li>▪ All other data including assay results are imported via Datashed software.</li> </ul>





		<ul style="list-style-type: none"> <li>Drillholes, sampling and assay data is stored in a SQL Server database located in a dedicated data center.</li> </ul>
	<ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>none</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes were located using hand held GPS.</li> </ul>
	<ul style="list-style-type: none"> <li>Specification of the grid system used.</li> </ul>	<ul style="list-style-type: none"> <li>MGA94 Zone 51 grid coordinate system is used.</li> <li>A two point transformation is used to convert the data from AMG84_51 mine grid and vice versa.</li> </ul>
	<ul style="list-style-type: none"> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Elevation data is captured with hand held GPS, and cross referenced with local topographical maps (DMP produced), SRTM data and recently captured DTM models from recently flown aerial photo surveys.</li> <li>Collar positions were picked up by suitably qualified surface and underground surveyors</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes are located and specifically planned according to target location and stratigraphic location.</li> </ul>
	<ul style="list-style-type: none"> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are collected at 1m intervals (Diamond and Aircore) and 4m composites (RC).</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>4m composites applied.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> </ul>	<ul style="list-style-type: none"> <li>The majority of the drill holes are orientated to achieve intersection angles as close to perpendicular as possible.</li> </ul>
	<ul style="list-style-type: none"> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>No orientation based sampling bias has been observed in the data, intercepts are reported as downhole lengths.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Standard West Australian mining industry sample security measures were observed.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by the Company.</li> </ul>



## JORC 2012 TABLE 1 – FORRESTANIA EXPLORATION

### SECTION 2: REPORTING OF EXPLORATION RESULTS

(Criteria listed in Section 1, also apply to this section.)

Criteria	JORC Code Explanation	Commentary																																																																
Mineral tenement and land tenure status	<ul style="list-style-type: none"><li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li><li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li></ul>	<ul style="list-style-type: none"><li>Forrestania Nickel Operations comprises approximately 125 tenements covering some 900km2 within the Central Yilgarn Province. The tenements include exploration licences, prospecting licences, general purpose leases, miscellaneous licences and mining leases.</li><li>Western Areas wholly owns 106 tenements, 55 tenements of which were acquired from Outokumpu in 2002 and a further 51 tenements acquired from Kagara in March 2012 (some which are subject to various third party royalty agreements). The remainder of the tenements are subject to Joint Ventures.</li><li>A number of the Kagara tenements are subject to third party royalty agreements.</li><li>All the tenements are in good standing. Six tenements are pending grant.</li></ul>																																																																
Exploration done by other parties	<ul style="list-style-type: none"><li>Acknowledgment and appraisal of exploration by other parties.</li></ul>	<ul style="list-style-type: none"><li>Western Areas has been exploring its wholly owned tenements since 2002. The tenements subject to the Kagara sale which took place in March 2012 were explored by Kagara since 2006 and Lion Ore and St Barbara prior to that time.</li><li>Western Areas has managed the Mt Gibb JV since 2009 (Great Western Exploration explored the ground prior to that time).</li><li>Kidman Resources Limited has entered into a Farm-in and Joint Venture with Western Areas, with a Stage 1 opportunity to earn in to 50% lithium rights.</li></ul>																																																																
Geology	<ul style="list-style-type: none"><li>Deposit type, geological setting and style of mineralisation.</li></ul>	<ul style="list-style-type: none"><li>The FNO lies within the Forrestania Greenstone Belt, which is part of the Southern Cross Province of the Yilgarn Craton in Western Australia. The main deposit type is the komatiite hosted, disseminated to massive Nickel sulphide deposits, which include the Flying Fox and Spotted Quoll deposits which are currently being mined. The mineralisation occurs in association with the basal section of high MgO cumulate ultramafic rocks.</li><li>The greenstone succession in the FNO district also hosts a number of orogenic lode gold deposits of which Bounty Gold Mine is the biggest example. Some exploration for this style of deposit is undertaken by Western areas from time to time in the FNO tenements.</li></ul>																																																																
Drill hole Information	<ul style="list-style-type: none"><li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:<ul style="list-style-type: none"><li>easting and northing of the drill hole collar</li><li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li><li>dip and azimuth of the hole</li></ul></li></ul>	<ul style="list-style-type: none"><li>Drill hole summary details supporting reported intersections from the Cosmic Boy Project are captured in the enclosed table.</li></ul> <table><tr><th>HOLEID</th><th>Easting</th><th>Northing</th><th>RL</th><th>EOH Depth (m)</th><th>Type</th><th>DIP</th><th>Azimuth</th></tr><tr><td>MHRC109</td><td>764170</td><td>6436408</td><td>382</td><td>66</td><td>RC</td><td>-60</td><td>90</td></tr><tr><td>MHRC110</td><td>763879</td><td>6436208</td><td>395</td><td>60</td><td>RC</td><td>-60</td><td>90</td></tr><tr><td>MHRC111</td><td>763929</td><td>6436208</td><td>375</td><td>60</td><td>RC</td><td>-60</td><td>90</td></tr><tr><td>MHRC112</td><td>763977</td><td>6436211</td><td>383</td><td>60</td><td>RC</td><td>-60</td><td>90</td></tr><tr><td>MHRC113</td><td>764026</td><td>6436206</td><td>384</td><td>54</td><td>RC</td><td>-60</td><td>90</td></tr><tr><td>MHRC114</td><td>764182</td><td>6436206</td><td>384</td><td>60</td><td>RC</td><td>-60</td><td>90</td></tr><tr><td>MHRC115</td><td>764128</td><td>6436211</td><td>385</td><td>60</td><td>RC</td><td>-60</td><td>90</td></tr></table>	HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	MHRC109	764170	6436408	382	66	RC	-60	90	MHRC110	763879	6436208	395	60	RC	-60	90	MHRC111	763929	6436208	375	60	RC	-60	90	MHRC112	763977	6436211	383	60	RC	-60	90	MHRC113	764026	6436206	384	54	RC	-60	90	MHRC114	764182	6436206	384	60	RC	-60	90	MHRC115	764128	6436211	385	60	RC	-60	90
HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth																																																											
MHRC109	764170	6436408	382	66	RC	-60	90																																																											
MHRC110	763879	6436208	395	60	RC	-60	90																																																											
MHRC111	763929	6436208	375	60	RC	-60	90																																																											
MHRC112	763977	6436211	383	60	RC	-60	90																																																											
MHRC113	764026	6436206	384	54	RC	-60	90																																																											
MHRC114	764182	6436206	384	60	RC	-60	90																																																											
MHRC115	764128	6436211	385	60	RC	-60	90																																																											



- down hole length and interception depth
- hole length.

- If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.

MHRC116	764079	6436209	385	60	RC	-60	90
MHRC117	762928	6433303	403	54	RC	-60	90
MHRC118	762883	6433302	414	60	RC	-60	90
MHRC119	762830	6433304	407	60	RC	-60	90
MHRC120	762784	6433303	395	60	RC	-60	90
MHRC121	762729	6433303	405	60	RC	-60	90
MHRC122	762680	6433304	394	60	RC	-60	90
MHRC123	762635	6433304	392	60	RC	-60	90
MHRC124	762581	6433306	387	60	RC	-60	90
MHRC125	762533	6433301	398	60	RC	-60	90
MHRC126	762483	6433300	399	60	RC	-60	90
MHRC127	762432	6433298	384	60	RC	-60	90
MHRC128	762383	6433301	384	60	RC	-60	90
MHRC129	762339	6433300	402	60	RC	-60	90
MHRC130	762286	6433305	404	60	RC	-60	90
MHRC131	762219	6432897	399	60	RC	-60	90
MHRC132	762269	6432899	402	60	RC	-60	90
MHRC133	762322	6432893	401	60	RC	-60	90
MHRC134	762368	6432898	411	60	RC	-60	90
MHRC135	762420	6432900	396	54	RC	-60	90
MHRC136	761082	6431896	393	60	RC	-60	90
MHRC137	761187	6431888	392	60	RC	-60	90
MHRC138	760988	6431891	406	60	RC	-60	90
MHRC139	761277	6431898	423	60	RC	-60	90
MHRC140	761382	6431893	407	60	RC	-60	90
MHRC141	761435	6431894	395	40	RC	-60	90
MHRC142	761485	6431897	407	60	RC	-60	90
MHRC143	761532	6431894	399	60	RC	-60	90
MHRC144	761578	6431892	394	60	RC	-60	90
MHRC145	761635	6431896	397	30	RC	-60	90
MHRC145A	761627	6431891	398	36	RC	-60	90
MHRC146	761677	6431895	396	60	RC	-60	90
MHRC147	762866	6432901	408	60	RC	-60	90
MHRC148	762814	6432903	402	24	RC	-60	90
MHRC148A	762810	6432901	402	60	RC	-60	90
MHRC149	762765	6432901	401	60	RC	-60	90
MHRC150	762722	6432903	407	54	RC	-60	90
MHRC151	762666	6432900	406	54	RC	-60	90
MHRC152	762621	6432900	405	60	RC	-60	90
MHRC153	762573	6432899	391	60	RC	-60	90
MHRC154	762522	6432903	396	60	RC	-60	90
MHRC155	762470	6432899	425	60	RC	-60	90
MHRC156	762143	6432501	417	56	RC	-60	90
MHRC157	762198	6432498	377	54	RC	-60	90
MHRC158	762248	6432499	396	60	RC	-60	90
MHRC159	762296	6432498	382	54	RC	-60	90
MHRC160	762346	6432497	401	54	RC	-60	90
MHRC161	762403	6432499	397	60	RC	-60	90
MHRC162	762745	6432507	474	60	RC	-60	90
MHRC163	762692	6432507	396	60	RC	-60	90
MHRC164	762643	6432506	397	60	RC	-60	90
MHRC165	762594	6432501	386	60	RC	-60	90
MHRC166	762550	6432498	395	60	RC	-60	90
MHRC167	762501	6432498	398	55	RC	-60	90
MHRC168	762451	6432500	396	60	RC	-60	90

## Data aggregation methods

- In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.
- Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of

- **Standard weighted averaging of drill hole intercepts were employed. No maximum or minimum grade truncations were used in the estimation.**
- **The reported assays have been length and bulk density weighted. A lower arbitrary 0.5% Ni cut-off is applied, with no top cut applied. High grade intercepts internal to broader zones of mineralisation are reported as included intervals.**
- **Metal equivalents have not been used**



	<p>such aggregations should be shown in detail.</p> <ul style="list-style-type: none"> <li>▪ The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>▪ These relationships are particularly important in the reporting of Exploration Results.</li> <li>▪ If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>▪ If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Drill hole intersections may not be true widths</b></li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>▪ Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Included within report</b></li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>▪ Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>All relevant assay results have been reported</b></li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>▪ Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Included within the report</b></li> <li>▪ <b>Geophysics</b></li> <li>▪ <b>Information on structure type, dip, dip direction alpha and beta angles, texture, shape, roughness and fill material is stored in the structural logs in the database</b></li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>▪ The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>▪ Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Preliminary plans are included within the report</b></li> <li>▪ <b>Future explorations programs may change depending on results and strategy</b></li> </ul>





## JORC 2012 TABLE 1: WESTERN GAWLER JOINT VENTURE

### SECTION 1: SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code Explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Air-core (AC) and Reverse Circulation (RC) drilling is used for sampling.</li> <li>Each sample interval is split to approximately 3kg using a rig mounted rotary splitter.</li> <li>Each sample is sent for analysis to ALS Global laboratories in Perth, Western Australia.</li> <li>The sample is pulverised in the laboratory (total prep) to produce a sub sample for assaying.</li> <li>All sampling was conducted using WSA QAQC sampling protocols which are in accordance with industry best practice.</li> </ul>
<i>Drilling Techniques</i>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Exploration targets are tested using AC and RC drilling. Holes were drilled between 60-90 degrees.</li> <li>A truck-mounted air-core rig is used with a 3 inch diameter face sampling hammer drilling or Air-Core bit.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias</li> </ul>	<ul style="list-style-type: none"> <li>Drilling recoveries are digitally logged, recorded and captured within the project database.</li> <li>Overall recoveries are &gt;95% and there has been no significant loss of sample material due to ground or drilling issues.</li> <li>Each individual sample is visually checked and logged for recovery, moisture and contamination.</li> <li>The style of expected mineralisation and the consistency of the mineralised intervals are expected to preclude any issue of sample bias due to material loss or gain.</li> </ul>



Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Geological logging is recorded and validated in MS excel spreadsheets (Toughbook platform)</li> <li>Drill chips are logged for lithology, mineralogy, mineralisation, weathering, fabric, grainsize, colour and other relevant features.</li> <li>Geotechnical logging was not completed due to the nature of drill method.</li> <li>All holes have been logged from the surface to the end of hole.</li> <li>Petrology is used to verify the field geological logging.</li> </ul>
Sub-sampling techniques and sampling preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>The drill samples were collected every metre on the drill rig using a rotary splitter.</li> <li>When required, composite samples are taken using a sampling spear.</li> <li>Field QC procedures involve the use of certified reference material as assay standards, along with blanks, duplicates and barren washes. The insertion rate of these averaged 1:20, with an increased rate in mineralised zones.</li> <li>Field duplicates are conducted on approximately 1 in 25 drill intersections.</li> <li>The sample sizes are considered to be appropriate to correctly represent the geological model based on: the style of mineralisation, the thickness and consistency of the expected intersections, the sampling methodology and percent value assay ranges for the primary elements.</li> </ul>
Quality of assay data laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>All samples are processed by ALS Minerals (Australian Laboratory Services P/L) in Perth, Western Australia</li> <li>All drill samples are subjected to ICP-MS (ME-MS61 and ME-MS61r for selected EOH samples) analysis using nitric, perchloric, hydrofluoric and hydrochloride acid digest.</li> <li>All samples are also assayed for PGE's using PGM-ICP23</li> <li>Standards and blanks are routinely used to assess company QAQC (approx 1 standard for every 25-50 samples).</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>Primary data was collected using validated MS excel spreadsheets, on Toughbook computers.</li> </ul>



	<ul style="list-style-type: none"> <li>▪ The use of twinned holes.</li> <li>▪ Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>▪ Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All data is validated by the supervising geologist and sent to WSA Perth for further validation and integration into an Acquire database.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>▪ Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>▪ Specification of the grid system used.</li> <li>▪ Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Drill holes were located using hand held GPS.</li> <li>▪ Elevation data is captured with hand held GPS, and cross referenced with local topographical maps (DMP produced), SRTM data and recently captured DTM models (where covered by the Aeromagnetic Surveys – Thomson Aviation).</li> <li>▪ MGA94 Zone 53 grid coordinate system is used.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>▪ Data spacing for reporting of Exploration Results.</li> <li>▪ Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>▪ Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Drill holes are located and specifically planned according to target location and stratigraphic location.</li> <li>▪ Samples are collected every metre down hole.</li> <li>▪ Sample compositing has not yet been applied, but may do so depending on the assay information required.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>▪ Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>▪ If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The majority of the drill holes are drilled vertically which may reduce range of lithologies or cross section of stratigraphy sampled in areas that are steeply dipping.</li> <li>▪ Heritage and/or environmental constraints may prevent some ideal drilling solutions.</li> <li>▪ No orientation based sampling bias has been observed in the data, intercepts are reported as down-hole lengths.</li> </ul>
<i>Sample Security</i>	<ul style="list-style-type: none"> <li>▪ The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>▪ All samples are captured and prepared for transport onsite under the supervision of WSA staff.</li> <li>▪ All samples are collected in sealed task specific containers (Bulk bags – plastic pallets) and delivered from site to Perth and then the assay laboratory via WSA staff.</li> </ul>
<i>Audits and Reviews</i>	<ul style="list-style-type: none"> <li>▪ The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Adrian Black of Newexco Pty Ltd (a member of the AIG), an independent exploration company, has reviewed the data and sampling techniques employed by WSA.</li> </ul>



## SECTION 2: REPORTING OF EXPLORATION RESULTS

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code Explanation	Commentary																																								
Mineral tenement and land tenure status	<ul style="list-style-type: none"><li>▪ Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li><li>▪ The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li></ul>	<ul style="list-style-type: none"><li>▪ The Western Gawler Project comprises 6 exploration licenses covering some 4,448km2, of which 5 are held 100% WSA. (EL 6087(formerly EL 5077), EL6248 (formerlyEL 5199), EL6249 (formerly EL5200), EL5688 and EL5939)</li><li>▪ Licence EL 5880 (formerly EL 4440) is operated under the Strandline Resources Ltd / Western Areas Ltd Farm-In and Joint Venture (JV) Agreement.</li><li>▪ The Fowler JV Project consists of 5 exploration licenses under a Farm In and Joint Venture Agreement (FIJVA) between Iluka (Eucla Basin) Pty Limited and Western Areas Limited, all of which all are held by Iluka (Eucla Basin) Pty Limited. EL5878, EL5879, EL6251, EL5675 and, EL5452.</li></ul>																																								
Exploration done by other parties.	<ul style="list-style-type: none"><li>▪ Acknowledgment and appraisal of exploration by other parties.</li></ul>	<ul style="list-style-type: none"><li>▪ The project area was originally explored by BHP Billiton as part of its extensive gold, titanium, Iron and nickel target generation work, and more recently by Gunson Resources Limited (Nickel), Equinox (Base Metals and Gold) and Iluka Resources Ltd (Mineral Sands). It is deemed that the previous exploration was of variable effectiveness.</li><li>▪ The South Australian Government has performed widely spaced stratigraphic diamond drilling along a number of traverses in the tenure</li><li>▪ The success rate of historical RC drilling is low, while the AC and Diamond drilling was effective.</li><li>▪ Gravity, Magneto Tellurics and Airborne Electro-magnetics have been used in selective locations within the project area.</li><li>▪ The historical geophysics is deemed to have been effective.</li></ul>																																								
Geology	<ul style="list-style-type: none"><li>▪ Deposit type, geological setting and style of mineralisation.</li></ul>	<ul style="list-style-type: none"><li>▪ The Western Gawler Project lies within the Fowler Domain of western South Australia. The Fowler Domain is a Mesoproterozoic orogenic belt comprised of medium to high metamorphic grade basement lithologies and younger felsic, mafic and ultramafic intrusives.</li><li>▪ Similarly aged terranes globally contain significant accumulations of nickel and copper sulphides.</li><li>▪ Whilst not primary target types, the area may also be prospective for orogenic gold, IOCG and skarn related mineralisation.</li></ul>																																								
Drill hole Information	<ul style="list-style-type: none"><li>▪ A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</li><li>▪ Easting and northing of the drill hole collar</li><li>▪ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li><li>▪ dip and azimuth of the hole</li></ul>	<table><tr><th>HOLEID</th><th>Easting</th><th>Northing</th><th>RL</th><th>EOH Depth (m)</th><th>Type</th><th>DIP</th><th>Azimuth</th></tr><tr><td>19WGAC493</td><td>268395</td><td>6564736</td><td>142</td><td>73</td><td>AC</td><td>-90</td><td>000</td></tr><tr><td>19WGAC497</td><td>268633</td><td>6564434</td><td>150</td><td>81</td><td>AC</td><td>-90</td><td>000</td></tr><tr><td>19WGAC510</td><td>268250</td><td>6562330</td><td>131</td><td>53</td><td>AC</td><td>-90</td><td>000</td></tr><tr><td>19WGAC521</td><td>266953</td><td>6562272</td><td>158</td><td>54</td><td>AC</td><td>-90</td><td>000</td></tr></table>	HOLEID	Easting	Northing	RL	EOH Depth (m)	Type	DIP	Azimuth	19WGAC493	268395	6564736	142	73	AC	-90	000	19WGAC497	268633	6564434	150	81	AC	-90	000	19WGAC510	268250	6562330	131	53	AC	-90	000	19WGAC521	266953	6562272	158	54	AC	-90	000
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	<ul style="list-style-type: none"> <li>▪ down hole length and interception depth</li> <li>▪ hole length.</li> <li>▪ If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>▪ In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>▪ Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>▪ The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Where assays results have been reported, they represent both single sampling interval (1m) and composite intervals up to 3m in width.</b></li> <li>▪ <b>No metal equivalents have been used.</b></li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>▪ These relationships are particularly important in the reporting of Exploration Results.</li> <li>▪ If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>▪ If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Not applicable</b></li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>▪ Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Refer to Table for location coordinates relating to the reported elevated intervals.</b></li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>▪ Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Balanced reporting of material results is provided.</b></li> </ul>



<p><i>Other substantive exploration data</i></p>	<ul style="list-style-type: none"> <li>▪ Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Multi-element analysis was conducted routinely on all samples for a base metal and PGM suite and potentially deleterious elements.</b></li> </ul>
<p><i>Further work</i></p>	<ul style="list-style-type: none"> <li>▪ The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>▪ Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Exploration within the Western Gawler Project is ongoing.</b></li> <li>▪ <b>At this stage of the exploration program, the nature of the geological model is evolving. Details of further work and will be forthcoming as the project progresses.</b></li> </ul>